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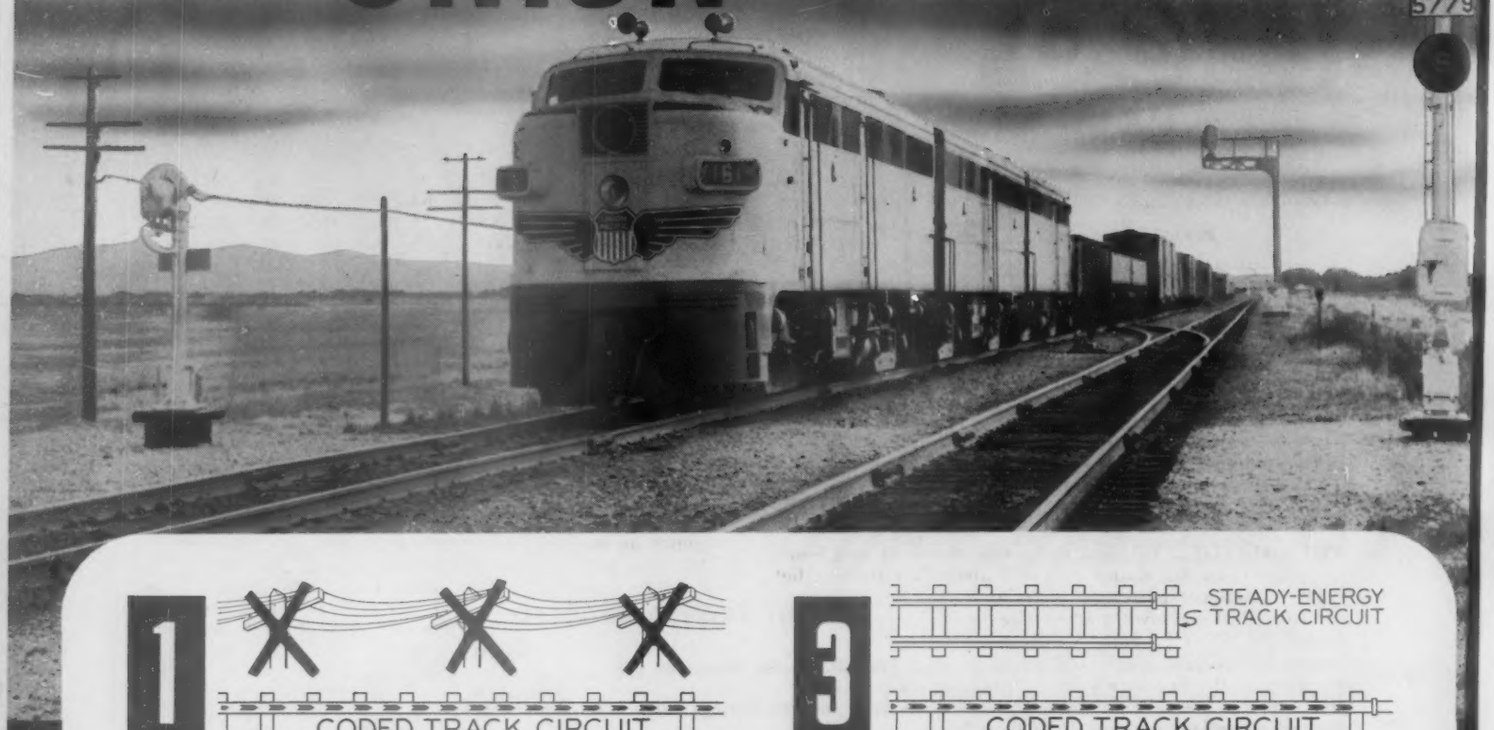

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"Union" Coded Track Circuit Control utilizes the track rails for transmittal of signal controls . . . makes it possible for you to reduce, or entirely eliminate, the cost of installing and maintaining line wire.

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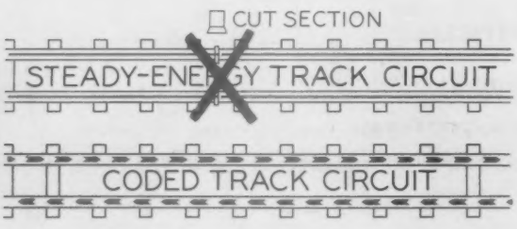

Since Coded Track Circuits can be much longer than those using steady-energy under comparable conditions, there are fewer cut sections to install and maintain.

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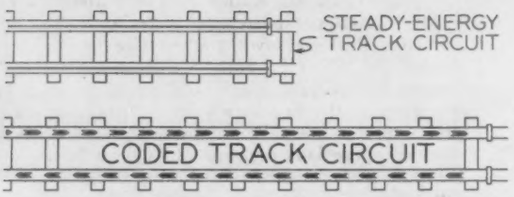

Important battery economies are possible, too, since the much longer Coded Track Circuits usually can be energized with less battery consumption than required for the shorter steady-energy circuits.

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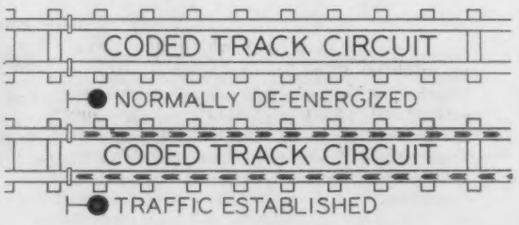

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WEEK AT A GLANCE

THE NEW AND THE OLD: With this issue, *Railway Age* makes its first appearance in a new format—slightly larger pages; bigger type in all feature articles and most News departments; a fixed position on page 5 for the contents, and on page 7 for "Week at a Glance"; and other changes designed to make it easier for you to read. But many old features still remain—chiefly, of course, the same complete weekly coverage of railway news and the same timely articles, carefully written and factually checked by men with railroad backgrounds, that have made *Railway Age* the standard magazine of the railroad industry. We hope you like our combination of desirable new features and proven old ones.

FREIGHT TRAFFIC—is the maior theme of this issue. On page 15, a description of the Seaboard's attractive but highly functional new Atlanta freighthouse. Page 28—how interline drayage saves transit time for l.c.l. freight at St. Louis. On pages 30 and 35, how portable communications booths and portable conveyors, respectively, expedite freight handling at the Southern's John Sevier transfer and express handling for the C.P. at Montreal. On page 32, a description of operations over the C. of G.'s Savannah piers; and on page 40, some stills from the N.&W.'s new movie "Operation Fast Freight."

MORE NEW CARS? A substantial increase in orders for new freight cars may develop within the next 60 days, the A.A.R.'s E. W. Coughlin told representatives of the Allegheny Regional Advisory Board last week. His statement, on top of last week's report of an A.A.R. study of a theoretical basis of car ownership, and evidence of shipper pressure for more car buying, may add up to more good news for car builders in a year which has already brought them a substantial quantity of business. Mr. Coughlin's statement is quoted in the News, as is a resolution of the Pacific Northwest Advisory Board urging more car purchases. Meantime, the railroads have done a pretty good equipment buying job without any outside pressure. Some of the salient facts about their recent purchases are outlined in the editorial on page 11, while the feature article on page 37 summarizes and tabulates equipment orders for the first six months of 1950—38,280 freight cars and 1,164 Diesel locomotive units, with more of both reported in this week's News.

NEWS HIGHLIGHTS: Loomis calls union rivalry biggest factor in "deterioration" of railroad labor relations.—Norfolk & Western abandons electric operation with opening of new Elkhorn tunnel.—B. & O. extends "Time-Saver" freight service to St. Louis.—Effective date of rail-barge differentials set back again.—Railroads carry 38,000 Boy Scouts to Valley Forge jamboree.—MacDonald condemns overloading of trucks in statement to Senate committee.—Latest developments in switchmen's strike.—General Railway Signal works out new method for long-term financing of signal installations.—New Jersey study shows heavy trucks double or triple highway surface maintenance costs.

ONE FOR THE BOOK: The Treasury Department—that watchdog of government funds which raises cain if you fail to include in your income tax return that $2 dividend from Consolidated Corset—has ruled that *truckers may deduct as business expenses fines paid to states for overloading and for overlength vehicles.* The reasoning seems to be that "fines are about equivalent to permits—they cost about the same and trucks are permitted to proceed without unloading after paying them"; hence they are a "necessary incident" to truck operation. It's a peculiar logic that makes a federal agency an accessory to open and premeditated violation of state law, for the purpose of *reducing* federal revenue. The Treasury might do well to read Public Roads Commissioner MacDonald's statement to the Myers committee—quoted in the News—that trucks can operate profitably without breaking state weight regulations.

LET'S GET TOGETHER, BOYS! Speaking last week at the dedication of Baltimore's new international airport, President Truman described as a "mossback" anyone who opposes air line subsidies. Four days later, at a dinner held in Baltimore to celebrate the dedication of the same federally aided project, the President's Secretary of Commerce advocated user charges to "help repay . . . the government's investment in new industries" (such as air lines), and argued against undue prolongation of federal aid. For a brief whirl on this governmental merry-go-round, see the News pages.

DRAFT SETTLEMENTS: On page 58, G. H. Albach, New York Central comptroller, tells how his company saves money by using draft settlement of inter-road bills.

"INTERNATIONALS" AND "RED RIVER": Those words aren't Commie propaganda, but the names of three fine new passenger trains just placed in service by the Great Northern between Seattle and Vancouver and St. Paul-Minneapolis and Grand Forks. Equipment for them, built by A.C.F., is described and illustrated in the article which begins on page 48.

"THE GREAT ADVENTURE": "The railroads are gambling just about all they have in the hope of winning the traffic and the sympathetic support of the shipping community. They will win if the shippers want them to—and unless they do win, the shippers themselves cannot expect to get the kind of well equipped service from the railroads which they need for their own profitable operation."—*From this week's leading editorial.*

Saluting GREAT NORTHERN'S

THE RED RIVER

AND THE TWO INTERNATIONALS

in whose furnishing we are proud to have had a part

GREAT NORTHERN'S new *Internationals* and *Red River* are models of modern train design! Combining speed, dream-like comfort, and sturdy efficiency, they are typical of the best of railroad manufacture. And we are proud to point out that from the rim of the locomotive headlight to the rear of the observation car, these great trains bear equipment with the ADLAKE trade-mark. Nearly all major American railroads have found out that ADLAKE Breather Windows, curtains, hardware and fixtures satisfy all requirements for safety, worry-free operation and passenger comfort.

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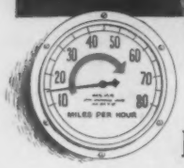

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LOWEST ACCELERATING AND RUNNING RESISTANCE: Glides on a single film of oil, like a skater on ice.

EASE OF MAINTENANCE: Can be fully inspected or replaced *on the line.* No shopping required.

UNIVERSAL INTERCHANGEABILITY: Simple—dependable—economical—safe.

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RAILWAY AGE

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THE RAILROADS' "GREAT ADVENTURE"

Never before in history have the railways gambled so much on the future as they are gambling now to provide the nation's shippers with good and adequate service. *Railway Age* used to show statistically that the volume of railway buying of equipment and materials for the improvement and maintenance of railway properties fluctuated with, was about the same annually as, and was determined by, the net operating income earned. Since World War II this has ceased to be true. Buying has run far ahead of net operating income.

In the twelve years 1929-1940 inclusive, annual net operating income averaged $614 million and purchases of equipment and materials $686 million — or $111 of purchases for each $100 of net operating income. During the five war years 1941-1945 inclusive, net operating income averaged $1,160 million annually and purchases $1,234 million — or $106 of purchases for each $100 of net.

Purchases Huge Compared to Earnings

In the four years following the war (1946-1949 inclusive) annual net operating income averaged only $771 million, *while purchases of equipment and materials averaged* $1,861 *million, or* $241 *of purchases for every* $100 *of net operating income earned. Purchases were more than twice as great in proportion to net earnings* as in the preceding 16 years.

All equipment bought is included in "capital expenditures." Materials bought are used partly for improvements and included in "capital expenditures," and used partly for maintenance of both equipment and roadway and structures and included in operating expenses.

During the four postwar years 1946-1949 inclusive, total capital expenditures were $4 billion and the largest in any four consecutive years in history. The previous record of $3½ billion in a four-year period was made in 1923-1926. Of the $3½ billion spent in 1923-1926, almost $2 billion, or 53 per cent was for new equipment, and $1 billion $700 million for improvements in roadway and structures. Of the $4 billion outlay in 1946-1949, inclusive, about $2 billion $800 million, or 69 per cent, was for equipment, and $1 billion $233 million, or 31 per cent, for improvements in roadway and structures.

$1,265 Million for 300,000 Freight Cars

Of the total expenditures for equipment in 1946-1949, inclusive, $1,265 million was made for freight cars and $1,041 million for locomotives. This compares with $1,137 million for freight cars and $479 million for locomotives in 1923-1926.

The huge expenditures for freight cars and locomotives in 1946-1949 were a recognition of the fact that the amount of both these kinds of equipment had seriously declined and their condition deteriorated during the depression and that during both the depression and World War II there had been great improvement in design, as a result of which even much of the equipment that was in serviceable condition had become obsolete.

Also freight car shortages that had developed during the war continued in the postwar years. There were total

net shortages throughout the second half of 1946 ranging from 3,154 cars to almost 40,000; substantial net shortages in all but a few weeks of 1947 and more than half the time in 1948. Total surpluses have exceeded total shortages throughout 1949 and until June of 1950, although there have continued to be shortages of some kinds of cars, especially box cars and gondolas.

The decline in total shortages, although shortages of some kinds of cars continue, has been largely due to the installation of new and improved freight cars and locomotives. Installations of new freight cars in 1946 were about 40,000, in 1947 about 63,000, in 1948 about 103,000 and in 1949 about 85,000 — a total of almost 300,000 in four years. Installations of new locomotives in the four years 1946-1949, inclusive, were 4,758. The numbers of freight cars and locomotives retired in these years were greater than the numbers installed; but the new equipment is so much more efficient than that retired that it is capable of rendering better and more service.

Large Equipment Buying Renewed in 1950

Orders for new equipment greatly declined in 1949, much of what was built and paid for in that year having been ordered in the immediately preceding years. But in 1950 *orders* have been greatly increased. Orders were placed for 38,175 freight cars in the first five months and three weeks of 1950 at a cost of $198 million, as compared with only 3,385 at a cost of $13 million $540 thousand in the corresponding part of 1949, and 45,120 at a cost of $177 million in the corresponding part of 1948. Orders for locomotives (all Diesel) in 1950 through the first three weeks of June were 1,108 costing $157 million, as compared with 290 Diesels, 13 steam and 7 electric costing $44 million in the corresponding part of 1949, and 461 Diesels and 59 steam costing $110 million in 1948. In an article elsewhere in this issue orders reported in *Railway Age* so far this year are tabulated in detail for individual railroads.

The magnitude of the expenditures mentioned in the foregoing and the purposes for which they have been made during years *when the railways have had the least net operating income in their history in proportion to the traffic handled* by them demonstrates the daring and heroic efforts they have been making and are still making to provide the freight service that shippers desire and need. Whence has come and is coming the money for these vast expenditures? Partly from reserves accumulated in the war years, partly from the small net earnings made in the postwar years—which have belonged to the stockholders—partly from the sale of equipment trusts, partly from the insurance companies which are buying equipment and leasing it to the railways for rentals which, like interest, must be paid on pain of bankruptcy.

How Shippers Can Assure Further Modernization

Many shippers have been critical of the railroads for not spending *more* money than they have for new and improved equipment. The answer to that criticism, as the figures cited plainly show, is that many if not most railroads have laid out just about all the money they have, and have stretched their credit to the limits of safety, to make the expenditures they have already made. To give their customers the kind of equipment and service they require, the railroads do not need, so much, a greater spirit of liberality with the money and credit they now have, but more money and credit to be liberal with. The reason they are short of money and credit to spend *in the interest of their customers* is that the nation does not have a transportation policy which gives the railroads the equality of competitive opportunity any business has to have if it is going to operate profitably. Only the shippers have the political power necessary to induce the nation to adopt a transportation policy which will restore to the railroads the chance to operate profitably, so they will be able to equip themselves adequately for the kind of service their customers want.

The railroads are gambling just about all they have in the hope of winning the traffic and the sympathetic support of the shipping community. They will win if the shippers want them to — and unless they do win, the shippers themselves cannot expect to get the kind of well equipped service from the railroads which they need for their own profitable operation.

STRIKES NOW CHRONIC

The strike of the Switchmen's Union against five railroads is in its fourth day at this writing — with more and bigger strikes in prospect. The newspapers have, naturally, not devoted much space or attention to this industrial warfare at home, in view of the more serious implications of the shooting going on in Korea.

But the warfare on the railroads is serious enough, in all conscience. The significant thing about it is that these railroad strikes must now be recognized as chronic. Once known as the great industry which practically *never* suffered from strikes, the railroads now give promise of becoming the nation's most strike-ridden enterprise. There is a cause for all things — that for the railroads' long freedom from strikes being the fear of the unionists that the strikes might be lost, and consequently the "old heads'" seniority. Since it has now been amply demonstrated that no striker on a railroad runs any risk whatever of loss (except his pay for time off during the strike) — and that he is practically certain to win something by striking — the prospects for the future are all too plain.

Railroad employees are human beings, and how can they be expected to forsake a course of action which, experience has taught them, never loses? There are two score unions on the railroads — not just one or two, as in most other large industries. Thus, with every major labor dispute tending nowadays to result in a strike, the

strike danger of the average industry needs only to be multiplied by 20 to calculate the comparative liability of the railroads to shut-downs from labor difficulties. This dreary outlook cannot be expected to improve until Congress either (1) enacts some such legislation as the Donnell Bill, outlawing the strike weapon on the railroads; or (2) removes from the statute books all legislation which makes it difficult or impossible for the railroads to replace strikers with new employees. The only way to discourage industrial warfare is to make it illegal or, at least, inject some risk into it.

SHOULD SPECIALISTS GOVERN OR ADVISE?

Modern terminal facilities still lag far behind the Diesel-electric locomotive production available to American railroads. Modern tools and labor saving devices are finding their way into Diesel shops and are proving their worth to such an extent that five mechanics well supplied with proper tools can replace six inadequately supplied mechanics who waste the equivalent of one mechanic's time searching for the tools to complete an assignment.

Manufacturers' recommendations, together with the experience peculiar to each railroad, suggest that periodic inspection and scheduled maintenance be followed closely in order to obtain the maximum service inherent in the Diesel locomotive.

Maintenance facilities being of major importance, have the railroads neglected to take into consideration the importance of a mechanical organization having the right to function with a minimum of restrictions? Is the departmental organization as modern as the equipment and facilities it is charged with using? Might it not pay to make an impartial analysis, eliminating personal prejudice, to see whether an organization has been provided which is free to function in the best interests of the railroad?

Organizations tend to be perpetuated, sometimes in inadequate form, by following the lines of least resistance. Do not existing methods sometimes restrict the thinking, development, and actions of present-day supervision, which, if permitted to assume a full measure of responsibility, would create an interest for future supervision?

Take, for example, the position of a master mechanic. Theoretically, he is the chief mechanical officer of a division, but practically, in many cases, he is permitted to function only as a mechanical robot, directed almost entirely by people who have no functional responsibility, but who are recognized as specialists. In many cases, the "specialty" seems to consist mainly in antagonizing the local supervision. If a master mechanic is not capable, he should be replaced by a man who is. But specialized positions, such as Diesel supervisor, tool supervisor, welding supervisor, air brake supervisor, chief boiler inspector, are established, with their work, in most cases, being often a duplication of that of the local supervision. This work could be carried out by an individual supervisor if the policy were made clear and the responsibility placed entirely upon him. Isn't it true that the man who is to perform an operation is in the best position to know the tools he requires and the method to follow, not to mention the satisfaction he gains from the fact that his superior has recognized his ability and skill?

It is not surprising that the railroads are unable to attract the right men as supervisors when they watch from the sidelines as mechanics and see the way in which their supervisors are restricted in making decisions that would be of real benefit to the railroad, not to mention the manner in which unsatisfactory conditions are allowed to continue until such time as a decision is handed down.

"As a stock owner, you are vitally concerned that the government-regulated railroad industry be permitted to make a fair return on the investment you and others have made—a return that was only 3.15 per cent on investment for all railroads in 1949, compared with a usual return of 7 or 8 per cent for public utilities and much more than that for most American business. Therefore, you have a vital interest in some of the factors which are limiting the railroads' ability to make a fair return.

"Government subsidies to highway, airway and waterway competitors represent an unfair burden on the rail carriers, who want no subsidy but only a chance to compete on a basis fair to all. The long-haul trucking business—box cars on tires—has increased tremendously. This affects you not only as a rail stockholder but as a motorist, suffering risk and discomfort on the road, and as a taxpayer, paying an unfair share for building and repairing highways.

"Specifically affecting the coal-carrying railroads is the permitted dumping in this country of excess foreign oil. Importation of this heavy oil at a dump price is, in its effect on our coal mining industry, equivalent to the importation of coal at a dump price. Although dumping is defended as a national defense measure, conserving domestic oil supplies, it is an anti-defense measure because it undermines the existence of strong coal mining and coal transportation industries. The continuing wartime excise tax on rail travel and freight shipments is also an unfair burden on the railroads.

"Nothing can have so much force in correcting these inequities from which the railroads suffer as a letter giving your views as a voter and taxpayer to your representatives in Congress. Your request for an end to unfair transportation subsidies, foreign oil dumping and rail excise taxes would be not only in the interests of a strong railroad system, indispensable to the nation in peace or war, but also in your interests as a railroad part-owner."

—Walter J. Tuohy, president of the Chesapeake & Ohio, in a letter to the road's stockholders

Mile after mile

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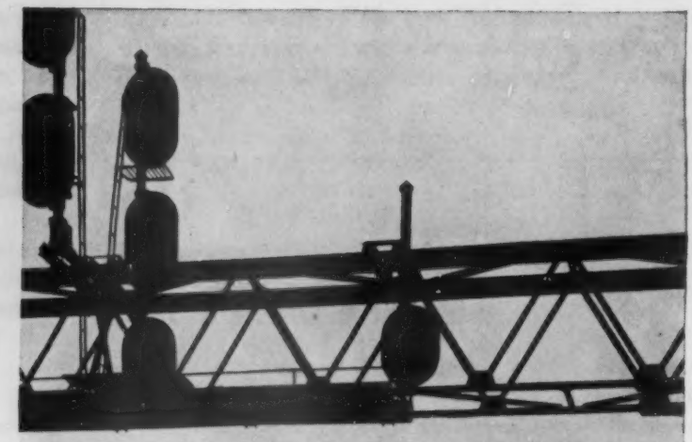

PROVED ON THE RUN — Coblax 2000, 3000 and 5000 are widely used as gear lubricants in the traction motor drives on electric and diesel-electric locomotives; gas-electric and multiple-unit cars.

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The office of the new freighthouse is situated in a projection of the structure, centrally located on the driveway side

A Freighthouse Can Please the Eye

New Seaboard facility at Atlanta, Ga., is at the same time functional in arrangement and handsome in appearance, inside and out—It is the largest of several such improvements completed by this road since the war ended

In building a number of new freighthouses since the war, the Seaboard Air Line has proceeded on the assumption that, with proper care, structures of this type can be handsome in appearance while, at the same time, remaining extremely functional in design. The latest and largest of the series of such buildings to be put in service is the freighthouse at Atlanta, Ga.

Utility the Watchword

In this structure the light, airy office section, rather than being stuck away in a corner, was given an identity of its own by making it an adjunct of the building as a whole. Color dynamics and other means have been used to brighten the building throughout. It is readily accessible to draymen, and an ample amount of parking space has been provided directly adjacent to it.

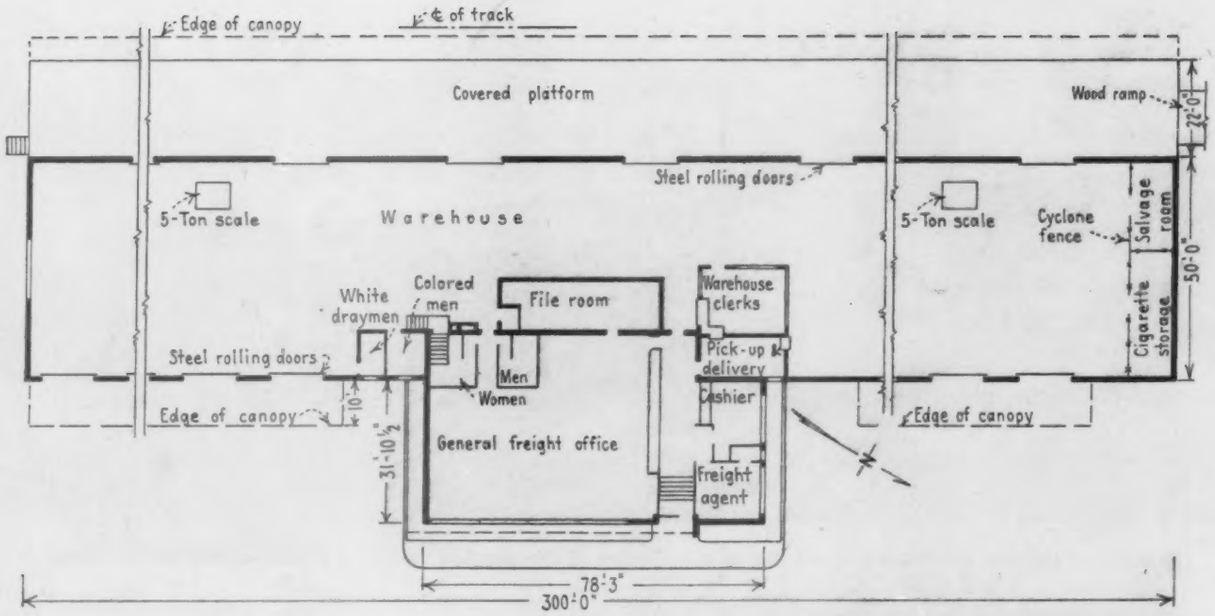
Atlanta is a hilly city and, because of its rapid growth during the last two decades, suitable freighthouse sites are few and far between. However, the Seaboard had such a location available near its Howells shops, which not only combined the desirable qualities of ready access and egress but also offered space for future expansion. As a preparatory step to the construction of the freighthouse and to provide access to it, the city relocated Chattahoochee avenue so that, instead of running through the shop area as was formerly the case, it now swings past the new building. A paved driveway, leading off the relocated avenue, gives access to the parking areas and the tailboard side of the freight platform.

These spacious driveway provisions, eliminating congestion of trucks coming to deliver and receive freight, could not have been arranged at the former location of the station, which was in a congested area of heavy traffic. The improved conditions have enabled the railway to speed up its pick-up and delivery service and the somewhat longer haul from some of the industries to the new location is more than offset by the much shorter time in which the trucks can receive and deliver freight there.

Also, in Atlanta, the trend in locating new industries and in moving existing ones is away from the congested downtown area and toward the new station site.

Within the building, much faster handling is also possible, as a result of a design developed to shorten truck hauls across the platform in a way that was impossible in the old station. Also, in the new structure more extensive mechanized handling of freight is possible, with a consequent reduction in hand trucking. The combination of faster movement of freight across the platform, plus the much faster turn-around of draymen's vehicles, adds up to material savings in time.

The relocation of the freight station has also enabled the road to consolidate this facility with a transfer operation which was formerly conducted as a separate activity at Howells. This merging of operations has



Floor plan of the new Atlanta freighthouse

The warehouse interior gets plenty of artificial and natural light; walls are painted a light color above a brown dado

brought about improved efficiency of operation and has greatly expedited the movement of l.c.l. traffic, from, to and through Atlanta.

Plenty of Doors

The warehouse portion of the new building is 50 ft. by 300 ft. in plan, with a projection 32 ft. by 78 ft. on the driveway side, in which the offices are housed, and with a covered platform, 22 ft. wide, extending the entire length on the track side. The sidewalls of the warehouse portion have 15 large steel rolling doors, 8 on the driveway side and 7 on the track side. The building is a one-story brick structure on concrete foundations, with a basement under the office section. It has an insulated steel roof deck covered by a four-ply built-up roof. The roof of the covered platform extends out over the car roofs, affording all-weather protection to freight moving in and out of the cars. The work of transferring freight to and from highway vehicles is protected by canopies 10 ft. wide on the driveway side.

The exterior of the freighthouse is finished with rough or mat texture brick in a range of colors. Throughout the structure the floors are of reinforced concrete which, in the warehouse and on the covered platform, is provided with a Kalman wearing surface. While the building is of fireproof construction, it is protected throughout by a dry-pipe automatic sprinkler system.

Flexibility and efficiency of operation are assured through the use of mechanical equipment for handling merchandise

Drawing a string of loaded trailers, a tractor heads into a box car at the new freighthouse

The freight room comprises a total of 12,530 sq. ft. of space and includes a lock-up room for valuable packages. The office space, with an area of 4,000 sq. ft., houses the entire freight agency, with sufficient room to accommodate additional personnel if a freight transfer should be constructed in the future. It consists of a private office for the agent, a cashier's office, an office for the warehouse clerks and a file room. A public corridor, extending across the office from the main entrance to the warehouse in the rear, has a terrazzo floor, while all other office floors are of concrete, with an asphalt tile wearing surface on an asphalt tile base. Acoustical tile was used for the office ceilings. The offices are heated by radiant heat, with all piping concealed in the concrete floors.

An attractively decorated counter, 2 ft. 6 in. wide and 28 ft. long, flanks the public corridor, and there is a similar counter, 9 ft. 6 in. long, in the cashier's office. The office windows have double Thermopane glass to protect against the direct rays of the sunlight and are also equipped with Venetian blinds. The ventilating system in the office portion consists of motor-driven fans located in the wall between the file room and the warehouse. The fans, connected to the attic space above the offices, exhaust air from the offices through ceiling ventilators and discharge it into the warehouse. The office has an ornamental aluminum entrance door and aluminum window sash.

Abundant Light Provided

Toilets for white employees and for draymen are located near the office section, while toilets, wash and locker rooms for colored employees are located in the basement. This level contains 830 sq. ft. and also houses the heating plant, consisting of an automatically-controlled oil-burning unit.

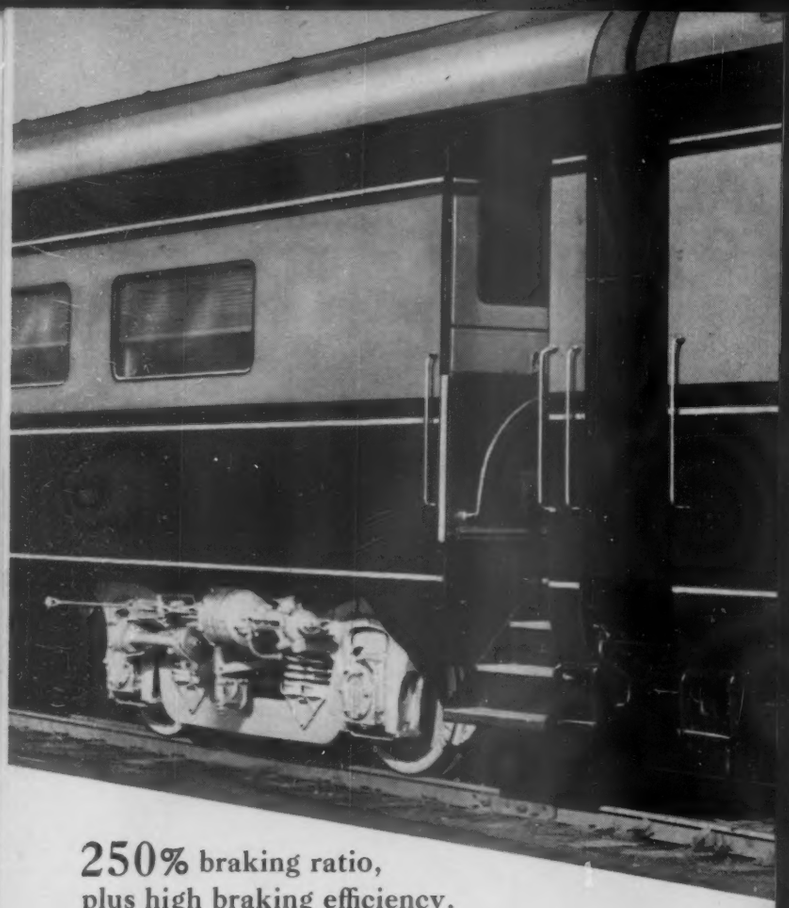
The design of the building might be described as functional modernistic and, in keeping with this design, the maximum possible natural and artificial light is disseminated, while the color scheme is designed to reflect rather than absorb light. There are 20 skylights, 13 located over the warehouse portion and 7 over the covered platform, affording excellent natural lighting over the trucking areas. These are supplemented by well-placed incandescent lights. The offices have fluorescent lighting, with attractive flush-type fixtures.

In all offices the interior plastered walls above the baseboard and in all toilet rooms above the wainscot are painted a dusty green. All plastered ceilings are painted oyster-shell white. The entire warehouse interior, as well as the basement, is painted standard old English brown to a height of 6 ft., with oyster-shell white above. The underside of the steel roof deck and all exposed trusses and bar joists are covered with aluminum paint, while all other exposed metal work, including the rolling doors, is painted a deep green, as is all of the inside trim.

The layout includes five tracks serving the freighthouse, as well as one long team track. It is so arranged that additional covered platforms and tracks may be built in the future if needed.

A somewhat unusual feature for a freighthouse is the attractive landscaping adjacent to the building and also at the entrance on Chattahoochee avenue.

The general contractor for the work was the Flagler Company, Atlanta, which built the structure under the general direction of W. D. Simpson, chief engineer of the Seaboard, with G. T. Daniel as resident engineer in direct charge of construction.



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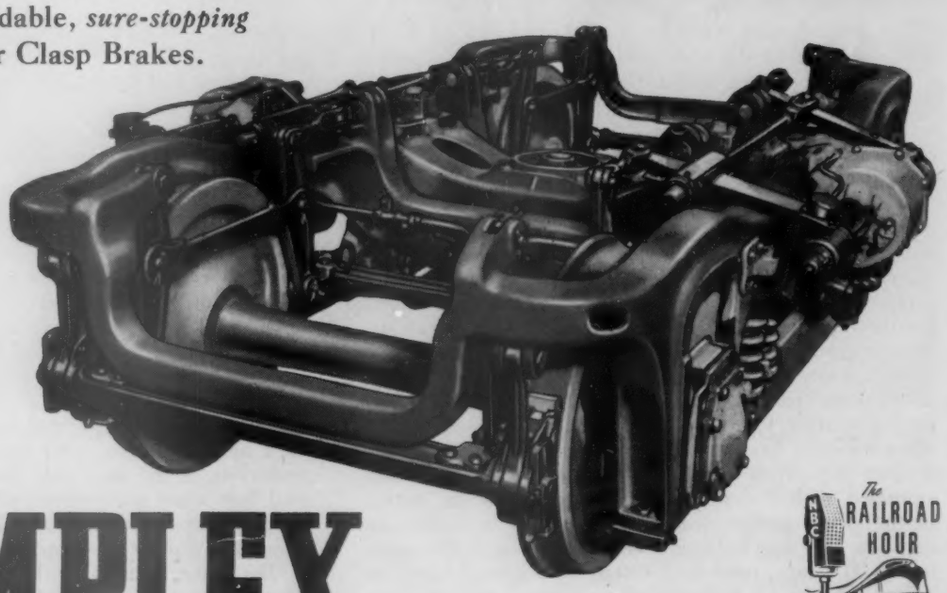
(Nothing Finer Can Be Said about Brakes)

250% braking ratio, plus high braking efficiency, give Simplex Clasp Brakes *power to stop* —at all speeds; in all weather. Well over 90% of all the passenger cars purchased by U.S. railroads throughout the past four years have dependable, *sure-stopping* Simplex Unit Cylinder Clasp Brakes.



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FAIRBANKS-MORSE

ALL-PURPOSE ROAD, TRANSFER AND SWITCHING LOCOMOTIVES

Two of the Central of Georgia's 1600 hp. Fairbanks-Morse road freight units.

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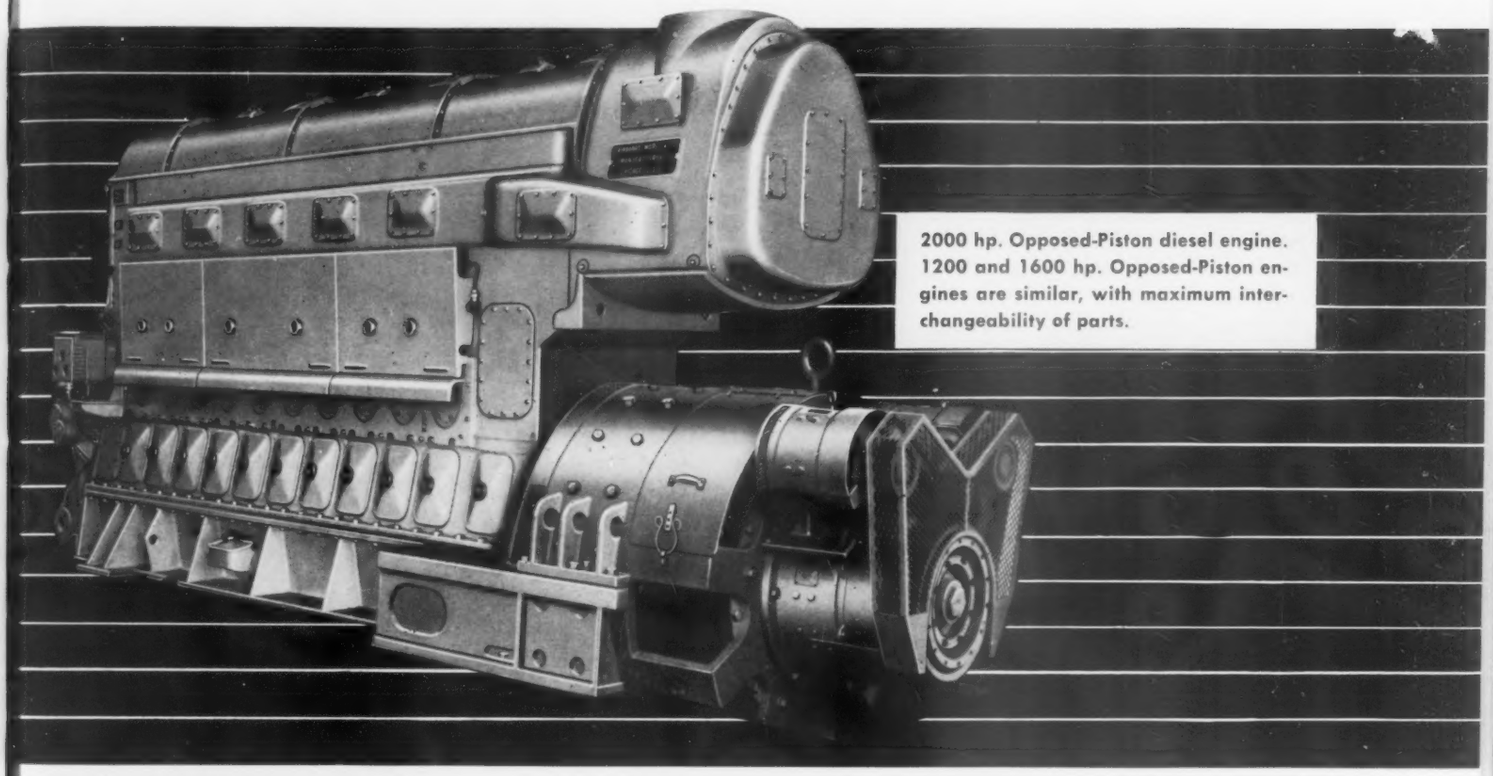
Outstanding Performance in Every Kind of Service

Preferred for performance – by enginemen, maintenance men, and the men who pay the bil

only FAIRBANKS-MORSE *offers . . .*

. . . opposed-piston DIESEL HORSEPOWER



2000 hp. Opposed-Piston diesel engine. 1200 and 1600 hp. Opposed-Piston engines are similar, with maximum interchangeability of parts.

compare! .. *with All Other DIESEL ENGINES*

Of all the components that make a locomotive, the engine is of primary importance. Through its degree of fuel economy, reliability and ease of maintenance it governs the success of the entire locomotive. This is largely why Fairbanks-Morse road freight, transfer and switching locomotives have been so rapidly adopted by railroads of every size, for every kind of service.

Powered by any one of three great Opposed-Piston diesel engines, they all have the same basic advantages—one engine per unit, 40% fewer moving parts, far easier and less costly maintenance, low fuel consumption—plus new standards for reliability recorded by over four million hp. in service. Comparison with other locomotives shows that it is the Opposed-Piston engine, coupled with progressive overall locomotive design, that insures the success of these Fairbanks-Morse locomotives — and promises you high return in having them on your road.

Here is a partial list of users of Fairbanks-Morse all-purpose road, transfer and switching locomotives:

Pennsylvania Railroad Co.
New York Central System
Union Pacific Railroad Co.
Chicago, Milwaukee, St. Paul & Pacific R.R. Co.
Denver & Rio Grande Western
C. R. R. of New Jersey
Southern Railway System
Chicago & North Western Ry.
Atchison, Topeka & Santa Fe Ry. Co.
Kansas City Southern Ry.
Kentucky & Indiana Terminal R.R.
Indianapolis Union Ry. Co.
Terminal Railroad Ass'n. of St. Louis
Nickel Plate Road
Missouri Kansas Texas Lines
Wabash R.R.
St. Louis-San Francisco Ry. Co.
Baltimore & Ohio R.R.
Akron, Canton & Youngstown Ry. Co.
Pittsburgh & West Virginia Ry. Co.
Long Island R.R. Co.
New York, New Haven & Hartford R.R. Co.
Central of Georgia Railroad

FAIRBANKS-MORSE

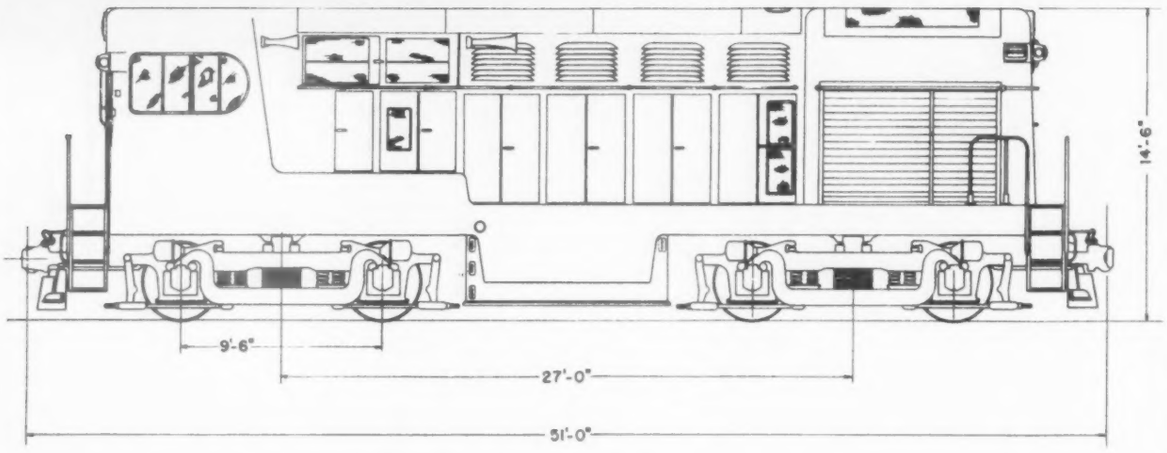
2000 hp.

HEAVY-DUTY LOCOMOTIVE

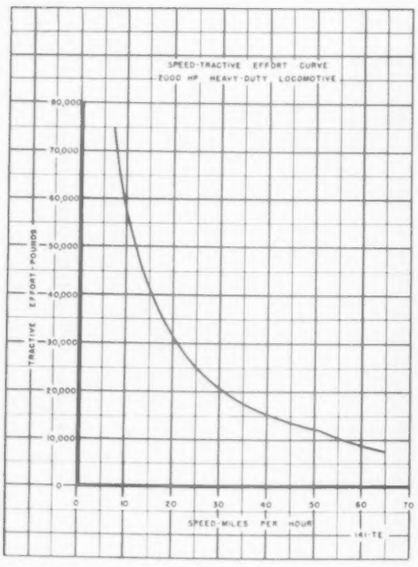
(Four-Axle)

This locomotive, with 250,000 pounds — its entire weight — on drivers, is widely used in heavy-duty, high-speed road freight operations. It is also designed for and used in heavy yard and transfer services.

(Elevation view)



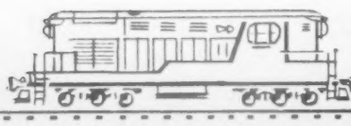
compare! ... For Pace Setting



GENERAL INFORMATION

2000 hp. H-20-44 Locomotive

TYPE	**0-4-4-0**
MAJOR DIMENSIONS	
Overall Length (Inside Knuckles)	51' 0"
Overall Width	10' 6"
Width of Power Plant Compartment	6' 0"
Width over Radiator Compartment	7' 0"
Overall Height Above Rail	14' 6"
Wheel Base Each Truck	9' 6"
Wheel Base Total Locomotive	36' 6"
Distance Between Truck Centers	27' 0"
WEIGHTS	
Total Locomotive in Working Order	250,000 lb.
On Drivers	250,000 lb.
TRANSMISSION	
Driving Motors	4
Driving Wheels	4 pr.
Diameter Wheels	42"
Gear Ratio	68:15
Maximum Speed	65 MPH
STARTING TRACTIVE EFFORT (at 30% adhesion)	**75,000 lb.**
MAXIMUM CONTINUOUS TRACTIVE EFFORT at 11.9 MPH	**52,500 lb.**
MINIMUM RADIUS CURVATURE (Locomotive alone)	**150 (39°)**
SUPPLIES	
Fuel Oil	1200 gal.
Lubricating Oil	250 gal.
Engine Cooling Water	200 gal.
Sand	28 cu. ft.

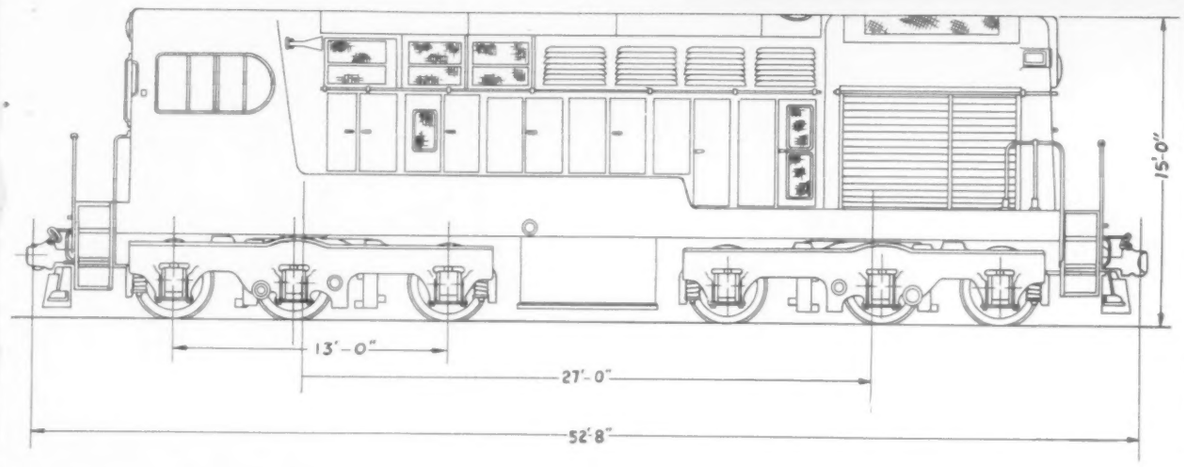


FAIRBANKS-MORSE . . . a name

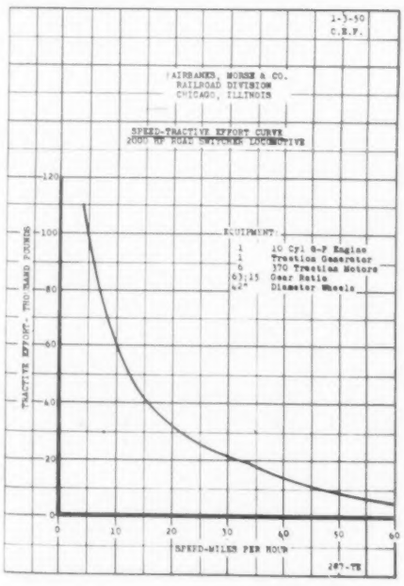
Six axles with six driving motors—330,000 pounds, its total weight—on drivers, more than qualify this locomotive for tough road assignments. A natural for the heaviest jobs in railroading, it has the plus factor of a single engine 2000 hp. power plant for simplicity, ruggedness and reliability.

FAIRBANKS-MORSE
2000 hp.
HEAVY-DUTY LOCOMOTIVE
(Six-Axle)

(Elevation view)



compare! ... For Compact Capacity



GENERAL INFORMATION
2000 hp. H-20-66 Locomotive

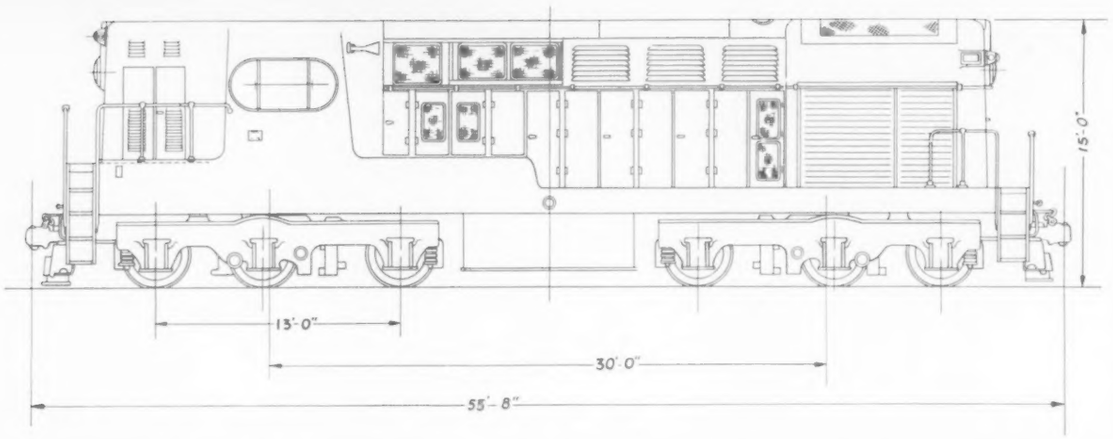
TYPE	**0-6-6-0**
MAJOR DIMENSIONS	
Overall Length (Inside Knuckles)	52' 8"
Overall Width	10' 6"
Width of Power Plant Compartment	6' 0"
Width over Radiator Compartment	7' 0"
Overall Height above Rail	15' 0"
Wheel Base Each Truck	13' 0"
Wheel Base Total Locomotive	39' 3"
Distance Between Truck Centers	27' 0"
WEIGHTS	
Total Locomotive in Working Order	330,000 lb.
On Drivers	330,000 lb.
TRANSMISSION	
Driving Motors	6
Driving Wheels	6 pr.
Diameter Wheels	42"
Gear Ratio	68:15
Maximum Speed	65 MPH
STARTING TRACTIVE EFFORT (at 30% adhesion)	**84,000 lb.**
MAXIMUM CONTINUOUS TRACTIVE EFFORT at 9.8 MPH	**78,750 lb.**
SUPPLIES	
Fuel Oil	1200 gal.
Lubricating Oil	250 gal.
Engine Cooling Water	200 gal.
Sand	28 cu. ft.

to remember in ... RAILROADING

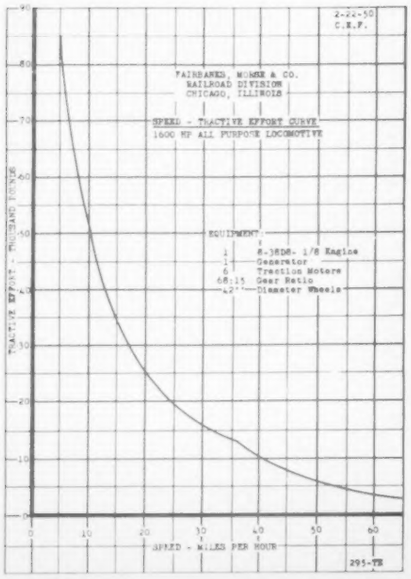
FAIRBANKS-MORSE
1600 hp.
ALL-PURPOSE LOCOMOTIVE
(Six-Axle)

This highly versatile six-axle unit is available with either six or four driving motors and train heating equipment to cover a broad range of service — freight, passenger, and transfer service. Low equal wheel loading of the four motor model renders it particularly adaptable to light rail, light bridge and roadbed conditions. The heavier six motor unit is specially designed for your heaviest 1600 hp. assignments in all classes of service.

(Elevation view)



compare! ..For more Tons on Less Roadway



GENERAL INFORMATION
1600 hp. Locomotive

MODEL	H-16-64	H-16-66
TYPE	0-6-6-0	0-6-6-0
NOMINAL MAJOR DIMENSIONS		
Overall Length (Inside Knuckles)	55' 8"	55' 8"
Overall Width	10' 4"	10' 4"
Width Across Cab Sheets	10' 0"	10' 0"
Width of Power Plant Compartment	6' 0"	6' 0"
Width Over Radiator Compartment	7' 0"	7' 0"
Overall Height Above Rail	14' 6"	15' 0"
Wheel Base Each Truck	10' 10"	13' 0"
Wheel Base Total Locomotive	40' 10"	42' 3"
Distance Between Truck Centers	30' 0"	30' 0"
Wheel Diameter	42"	42"
SUPPLIES		
Fuel Oil	800 gal.	800 gal.
Lubricating Oil	300 gal.	300 gal.
Engine Cooling Water	175 gal.	175 gal.
Sand	28 cu. ft.	28 cu. ft.
Heating Water	740 gal.	740 gal.
NOMINAL WEIGHTS		
Total Fully Loaded Without Boiler (Approx.)	252,000 lb.	300,000 lb.
On Drivers	168,000 lb.	300,000 lb.
Per Axle	42,000 lb.	50,000 lb.
Maximum Total Weight (Includes ballast)		325,000 lb.
PERFORMANCE		
STARTING TRACTIVE EFFORT (at 30% adhesion)	50,400 lb.	90,000 lb.
CONTINUOUS RATED TRACTIVE EFFORT	48,600 lb. (9.9 MPH)	78,700 lb. (6.0 MPH)
MAXIMUM SPEED	70 MPH	65 MPH

Note: Chart shown is for 1600 hp. locomotive with six axles, six traction motors, 68:15 gear ratio.

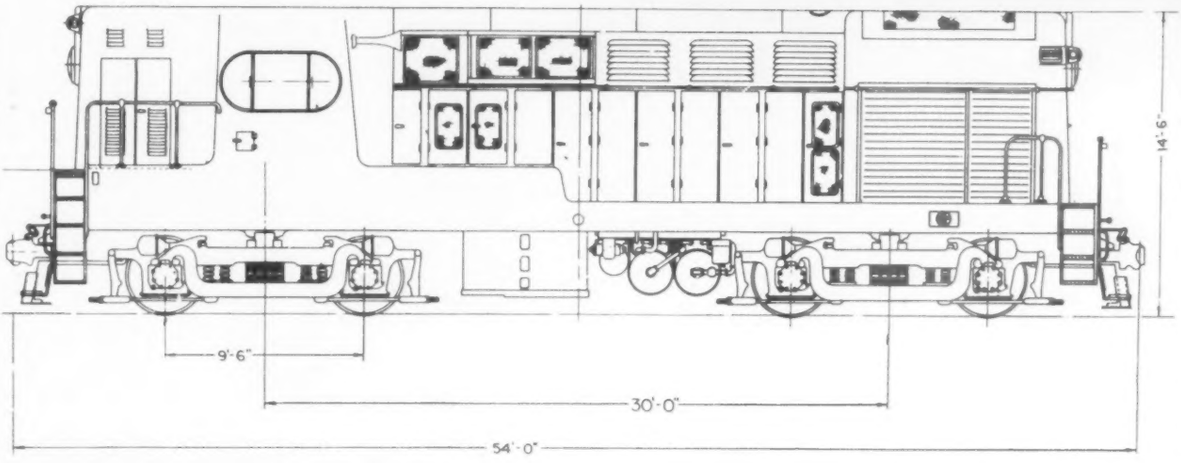
Also available with four driving motors, 63:15 gear ratio.

FAIRBANKS-MORSE... a name

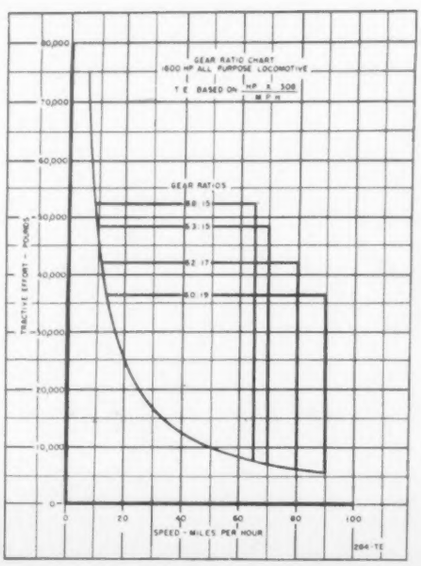
Versatility is manifest in the specifications of this 1600 hp. all-purpose unit. On four axles with four driving motors — available with boiler equipment of up to 2750 lb./hour capacity — it is used to cover the broadest range of service. Replete with Fairbanks-Morse engineering skill and O-P engine reliability, it is a recognized leader of its class.

FAIRBANKS-MORSE
1600 hp.
ALL-PURPOSE LOCOMOTIVE
(Four-Axle)

(Elevation view)



...compare! ... For High Utilization



GENERAL DATA

1600 hp. H-16-44 Locomotive

TYPE	**0-4-4-0**
NOMINAL MAJOR DIMENSIONS	
Overall Length (Inside Knuckles)	54' 0"
Overall Width	10' 4"
Width Across Cab Sheets	10' 0"
Width of Power Plant Compartment	6' 0"
Width over Radiator Compartment	7' 0"
Overall Height Above Rail	14' 6"
Wheel Base Each Truck	9' 6"
Wheel Base Total Locomotive	39' 6"
Distance Between Truck Centers	30' 0"
Wheel Diameter	42"
SUPPLIES	
Fuel Oil	900 gal.
Lubricating Oil	300 gal.
Engine Cooling Water	175 gal.
Sand	28 cu. ft.
Heating Water	740 gal.
WEIGHTS	
Total Fully Loaded Without Boiler (Approx.)	240,000 lb.
On Drivers	240,000 lb.
Per Axle	60,000 lb.
PERFORMANCE	
STARTING TRACTIVE EFFORT (at 30% adhesion)	**72,000 lb.**
CONTINUOUS RATED TRACTIVE EFFORT (@ 9.2 MPH)	**52,500 lb.**
MAXIMUM SPEED	**65 MPH**

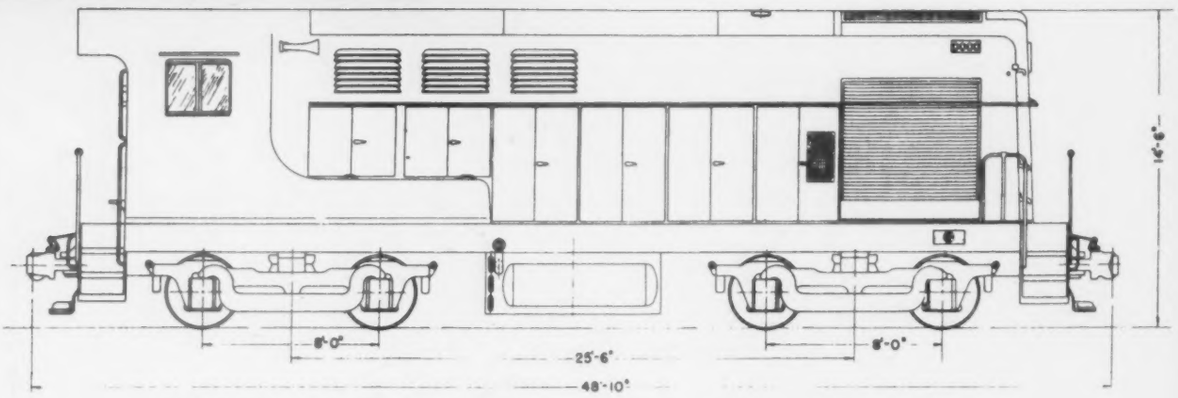
...e to remember in ... *RAILROADING*

FAIRBANKS-MORSE

1200 hp.

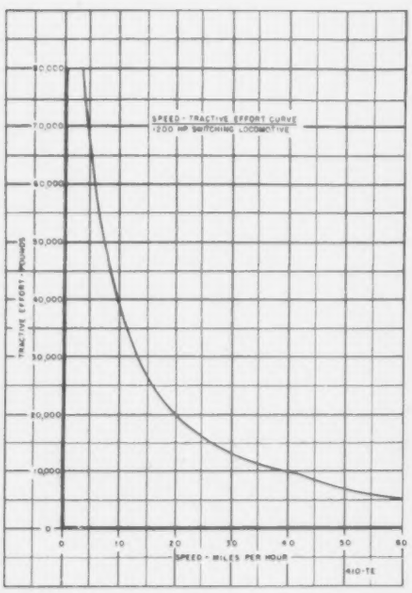
SWITCHING LOCOMOTIVE

High tractive effort, rapid acceleration, high maximum speeds and low shopping expense underlie this unit's high popularity. It is a "work horse" with proved high standards for maximum availability at lowest cost.



(Elevation view)

compare! ..For the Performance You Need



GENERAL DATA
1200 hp. H-12-44 Locomotive

MODEL	**H-12-44**
TYPE	**0-4-4-0**
NOMINAL MAJOR DIMENSIONS	
Overall Length (Inside Knuckles)	48' 10"
Overall Width	10' 2"
Width Across Cab Sheets	10' 0"
Width Over Power Plant Compartment	6' 0"
Overall Height Above Rail	14' 6"
Wheel Base Each Truck	8' 0"
Wheel Base Total Locomotive	33' 6"
Distance Between Truck Centers	25' 6"
Wheel Diameter	40"
SUPPLIES	
Fuel Oil	750 gal.
Lubricating Oil	250 gal.
Engine Cooling Water	135 gal.
Sand	28 cu. ft.
WEIGHTS	
Total Fully Loaded	246,000 lb.
On Drivers	246,000 lb.
Per Axle	61,500 lb.
PERFORMANCE	
STARTING TRACTIVE EFFORT (at 30% adhesion)	**73,800 lb.**
GEAR RATIO	**68:14**
MAXIMUM SPEED	**60 MPH**
MAXIMUM CONTINUOUS TRACTIVE EFFORT	**34,000 lb.**
SPEED AT MAXIMUM CONTINUOUS TRACTIVE EFFORT	**11.3 MPH**

FAIRBANKS-MORSE

a name worth remembering

DIESEL LOCOMOTIVES AND ENGINES • ELECTRICAL MACHINERY • PUMPS • SCALES
HOME WATER SERVICE AND HEATING EQUIPMENT • RAIL CARS • FARM MACHINERY

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CALES
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TIME-SAVER SERVICE
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LESS-CARLOAD FREIGHT

B&O TIME-SAVER SERVICE

A STREAMLINE LCL OPERATION THAT

SAVES *ONE-THIRD* OR MORE IN SHIPPING TIME!

OFFERS A NEW *SENTINEL* DEPENDABILITY IN DOOR-TO-DOOR SCHEDULES!

Ask our man!

BALTIMORE & OHIO RAILROAD

Constantly *doing things*—better!

Three dispatchers keep track of more than 400 units of equipment Columbia uses in the St. Louis interline transfer service and assure its efficient utilization. Left to right they are William Seitz, John Hobold (chief dispatcher) and Robert Reasoner

St. Louis Interline Drayage Averts L. C. L. Bottleneck

Service provided by Columbia Terminals many times faster than trap car movement—Off-track station also operated for patrons who dray their own freight

Since 1931 a large part of the l.c.l. freight being transferred between Western, Eastern and Southern railroads connecting at St. Louis, Mo., other than freight in overhead cars, has been handled by the trucks of the Columbia Terminals Company. Thus a service is provided that usually is substantially faster than the orthodox method of handling such freight in trap cars, according to many freight agents in the St. Louis-East St. Louis area. To paraphrase some of the agents, "If we get our trailers loaded and call Columbia Terminals by 2:30 p.m. any day, our freight usually makes an outbound connection the same day. If we loaded a trap car, it would be the next day or the day after before the freight reached the connecting line." Thus, a large volume of the transfer freight reaching St. Louis on any given morning is making an outbound connection the same afternoon, while most of the remainder makes its departure the next day. The data available indicate that the out-of-pocket cost of this service provided by Columbia Terminals is about the same as if the freight were placed in a trap car to be sent to the connecting line.

Since Columbia has some 28 or 30 tractors and 400 trailers engaged in this transfer service daily, in addition to the equipment assigned to pick-up and delivery service for several railroads in the St. Louis area, this operation demands that there be little time when the tractors are not on the move. In a day one tractor ordinarily will handle 10 or 12 transfer loads between the east and west sides of the Mississippi, but this has been known to go as high as 17, according to Columbia Terminals officers.

Three dispatchers handle the movement of all these vehicles. When a railroad has finished loading a trailer, a call is made to the dispatchers who send a tractor to pick up the load. At times this tractor will be required to take an empty trailer to the loading point in order to fill the gap left when the load is picked up. However, most empty spaces at freight sheds are filled early in the morning by a special crew of drivers.

Every possible effort is made to cut the number of "light" trips any tractor makes. Thus, each dispatcher has a particular zone of the St. Louis-East St. Louis area in which he keeps in touch with all equipment, so that when drivers call in after completing one job the dispatcher can direct them to nearby points to pick up other trailers.

Some freight still is being "trapped" across the river to connections, although at present a definite effort is being made to cut down the amount being transferred in this manner, in order further to improve service to shippers. Since drayage by Columbia Terminals generally is more than three times as fast as the trap car, it can be

Top — One of Columbia's trailers has been loaded and is being closed preparatory to being moved to another railroad's station. An empty is waiting to be filled

Center—A line of Columbia trailers at one of the stations in St. Louis. Although trailers of this construction can handle more freight than the usual rectangular trailer of the same dimensions, closed-body trailers soon will replace them

Bottom—Interior of the off-track station which Columbia operates for the railroads. St. Louis patrons of railroads which terminate in East St. Louis can pick up freight at, or deliver it to, this station instead of sending their trucks across the river, and it is distributed promptly to the proper roads

seen why many local freight agents, and some of their supervisors, are in favor of doing away with most of the trap cars.

Columbia Terminals also operates an off-track station in St. Louis for the railroads which terminate on the east side of the river. Columbia hauls l.c.l. to this station from the east side of the Mississippi and it is then picked up by the consignee. Columbia also consolidates freight drayed to the off-track station by shippers, freight which will move via one of the roads located on the Illinois side. That freight is moved daily to the east-side roads in time to make scheduled outbound trains.

PORTABLE COMMUNICATIONS BOOTH

The check clerk works in a portable booth

Loudspeaker hung on a nail in a car

Using a talk-back speaker system, one checker directs work of crews in two cars, and with a separate paging system, a foreman directs overall operations in large transfer on Southern at John Sevier

Four important lines of the Southern Railway System converge at Knoxville, Tenn. This is a transfer point, therefore, for a large volume of less-carload freight between north-and-south, as well as east-and-west routes. To expedite the handling of this freight, the Southern about 25 years ago constructed an l.c.l. transfer at John Sevier terminal, which is 8 mi. east of Knoxville. This transfer has three covered platforms, one 40 ft. wide and two 20 ft. wide, with tracks adjacent to each side of the three platforms accommodating a total of 105 cars.

Approximately 90 cars of inbound merchandise are unloaded each day, and distribution of the shipments is made to the various outgoing cars. The number of cars forwarded averages 100 daily. Cars are forwarded from this point to break bulk with principal points on the Southern, as well as various offline destinations, a few of which are: Columbus, Cleveland, Chicago, Minneapolis, Kansas City, Lincoln, Denver, San Francisco, Los Angeles, Portland, Tulsa, Oklahoma City, Dallas, Baltimore, and Philadelphia.

The work day at John Sevier transfer begins at 6:45 a.m. and closes at 4:30 p.m., seven days each week. Operations are under the supervision of J. S. Columber, agent. The overall force employed is 140 men. The equipment used in the transfer operation includes tractor-trailer, fork-lift and conventional two-wheel hand trucks.

The foreman in charge of transfer operation, whose office is on one of the platforms, directs a great portion of his work by use of a Tele-talk paging system. On his desk is a Tele-talk control panel which has a built-in microphone and loud-speaker. This panel is equipped with indicating lamps and keys by the operation of which he can communicate with any of the 14 talk-back speakers at locations spaced along the platforms. Also, by using a separate microphone connected to a paging system which covers all of the platforms, he can make general announcements or call any employee.

The communication system saves a great deal of time in the operation of the transfer, because new instructions, based on changed conditions, can be issued quickly. For example, when a car being loaded for a certain destination is full, the foreman is advised over the communication system, and he assigns an additional car to this destination. This information is given immediately to all employees by use of the paging system. On receipt of this information, the check clerks begin directing shipments for this destination to the new car, thereby eliminating a considerable amount of unnecessary trucking. Previously, when a change of routine or any congestion occurred on the platforms, considerable delay was experienced in getting information to the office, and instructions back to the platforms by messenger, whereas, with the Tele-talk speaker system, information can be exchanged quickly, thereby eliminating both delay and congestion. For example, if a clerk had a shipment that could be handled only by a lift truck, operation on this

Expedites L.C.L. Freighthouse Operations

The control for the Tele-talk system is on the foreman's desk in the office

car was delayed until a fork lift could be located and dispatched, which might consume 15 or 20 min. Now, a lift-truck is dispatched to any point immediately.

A separate system is used for direct communication between clerks, each in a portable booth, and two checkers, each in a separate car. The intercommunication set in each booth is arranged and designed to work with two-selective talk-back speakers—one located in each of the two cars that are being unloaded. The check clerk in a booth can communicate with either of these cars by the use of a selective switch.

The booths are equipped with a ventilating fan and an electric space heater, a desk, chair and electric lights. The walls and ceiling are acoustically treated to reduce noise. The booths are glass paneled and mounted on three rubber-tired wheels, 1 ft. in diameter. One wheel is on each side near the rear and the third in front where the pull handle is connected, as shown in the picture, so that the booth can be moved to any location near the cars to unloaded. Pneumatic rubber tires reduce both noise and vibration in the booth. The inside dimensions of each booth are 6 ft. 7 in. high, 4 ft. 7 in. long and 3 ft. 7½ in. wide. The floor, ceiling, windows and doors are closed to shut out noise so that the clerk can concentrate on his work.

One Clerk Handles Two Cars

The waybills for two cars at a time are given to a check clerk operating in such a portable booth, and, by rotating from one car to the other, he is able to keep both cars checked ahead, and the caller in each car is able to keep his crew busy. A crew consists of a leader or caller and four truckers for each car. The caller segregates the packages by consignee and destination, and this information is called off to the check clerk in the booth through the talk-back speaker located in his car. The check clerk then furnishes him with the proper information to mark the freight.

Commercial a.c. power at 110 volts is required in each booth for operation of the amplifier and other electrical equipment. This power is available through a plug-in connection located on each of the posts supporting the roof. Each booth has a two-conductor cable, 50 ft. long, for connecting a.c. power. The communications circuits are composed of four-conductor No. 16 flexible Tyrex cables (one pair for communication and one pair for signaling) which are extended from the booth to each car. Each cable is 125 ft. long so that one booth can serve two cars some distance apart. Cables are connected at both ends with Hubbell twist-lock polarized plug couplers. A piece of ordinary sole leather, about 4 in. wide and 1 ft. long, is attached to the side of each of the talk-back speakers used in the cars. A hole near the upper end of this leather is placed over a nail driven in the wall of a car so as to place the speaker at the height and location to afford proper operation for both incoming and outgoing conversation between the check clerk in the booth and the caller in the car.

The amplifiers, used on the system between each booth and the speakers in the cars with which it operates, are of special design to limit the effect of noise and extraneous sounds, and at the same time allow speech to go through clearly. These limiter-type amplifiers are the Model 8ALTS manufactured by the Electronic Communication Equipment Company, Chicago. Each is a package unit, having a built-in change-over relay and a source of 6.0 volt d.c. current for signaling purposes. There are two independent volume controls, one controlling the talk-out volume and the other the talk-back volume. The 5.0-watt undistorted output is obtained when the input is between —13 dbm. and —48 dbm. across 600 ohms. The check clerk has a push-to-talk foot-switch which, when pushed, connects his amplifier outgoing, and, when released, connects the amplifier incoming.

The talk-back speakers used in the cars and in the booths, as well as those at the 14 locations on the platforms connected to the office, are the Model 8A made by the Webster Company, Racine, Wis., and the same company made the central console in the foreman's office. The 20 paging speakers, also controlled from the office, are the 25-watt type made by Racon. Insulated No. 14 twisted-pair conductors, run in porcelain insulated rings on the roof support posts, are used for the circuits between the office and the 20 paging speakers and 14 talk-back speakers mounted permanently on the posts. These communications systems were planned and installed by railway forces under the jurisdiction of D. G. Whitfield, superintendent communications, with headquarters at Charlotte, N. C.

Clamshell working from ship's gear dumps nitrate of soda into hopper

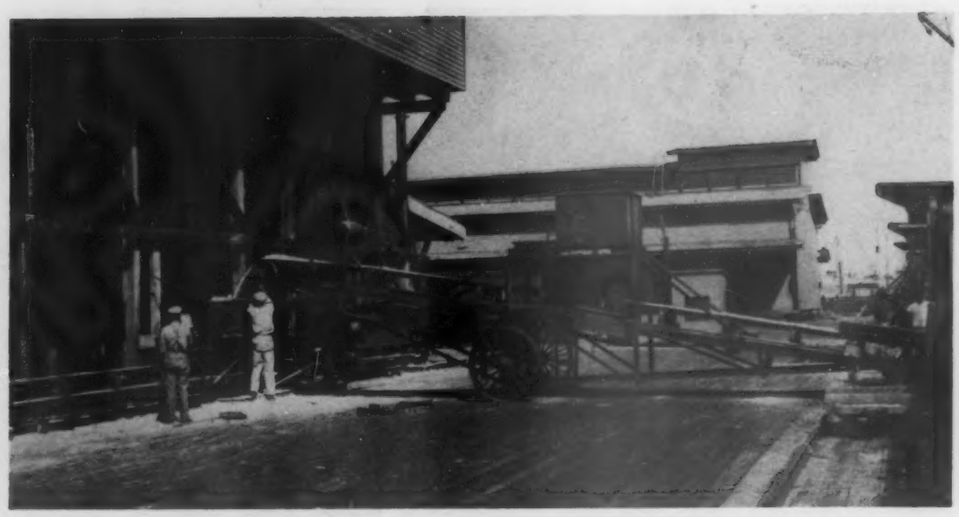
Central of Georgia's Savannah Piers Handle

Regular port of call for several steamship lines — Many types of materials-handling equipment in use

Fine harbor facilities, good steamship service, and the low commodity rates generally in effect in the South, plus adequate equipment for handling expeditiously a wide variety of commodities—both bulk and packaged—have enabled the Central of Georgia to draw to its Savannah, Ga., docks, import and export freight from and for a wide area. The materials handling equipment available at Savannah includes Hough "Payloaders," fork trucks, and large Link-Belt conveyor system for handling bulk commodities such as nitrate of soda or potash. Such a happy combination of circumstances and equipment makes for relatively low costs to the American exporter or importer.

Typical of imported commodities moving through the Savannah facilities are beet pulp, pineapples, cocoanuts, whiskey, burlap, nitrate of soda, sulphate of ammonia, sugar and potash. Outbound to foreign lands the list includes such varied commodities as peanuts, tobacco,

From hoppers nitrate is fed to the shipside conveyor, which consists of two 180 ft. sections, each feeding into the movable conveyor shown in left foreground. Above the portable conveyor is a part of a scale unit (in box) which weighs material passing over portable conveyor



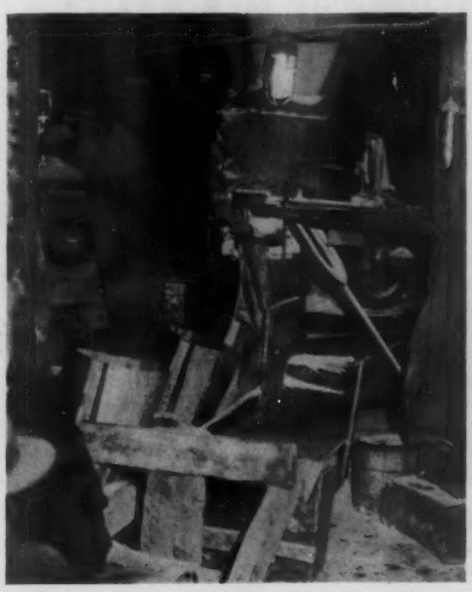
Portable conveyor dumps into a hopper which in turn discharges onto two other conveyors which feed elevators, one of which is at end of building in left background. Elevators raise nitrate to upper story of warehouse and into other hoppers

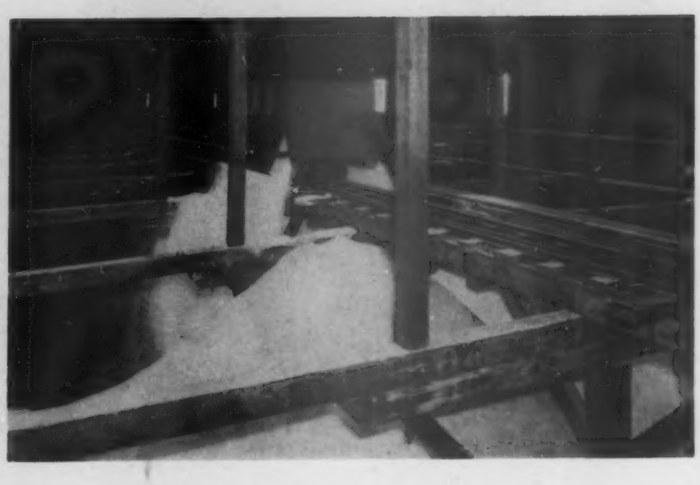
A Wide Variety of Export, Import Freight

Right—Hoppers at the end of the elevators feed the nitrate into automatically controlled 10-ton dump cars

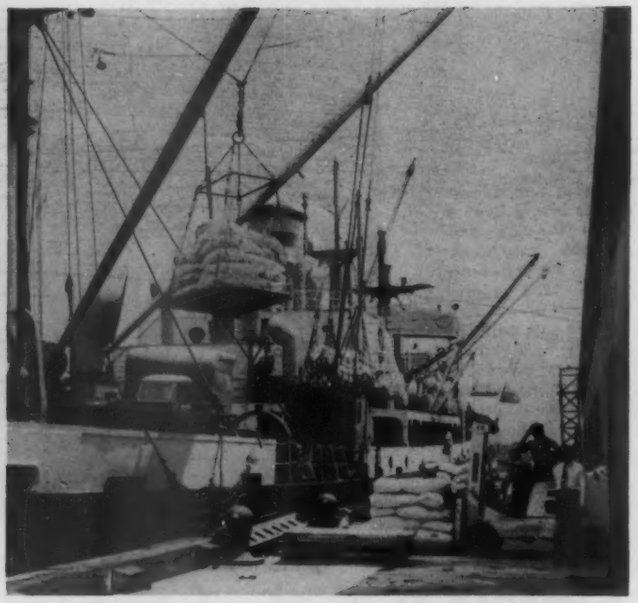
Below right—Dump cars ride on rails out over warehouse floor and dump their loads

Below left—One of the two sack fillers in the warehouse. Total capacity is 2,400 sacks per hour

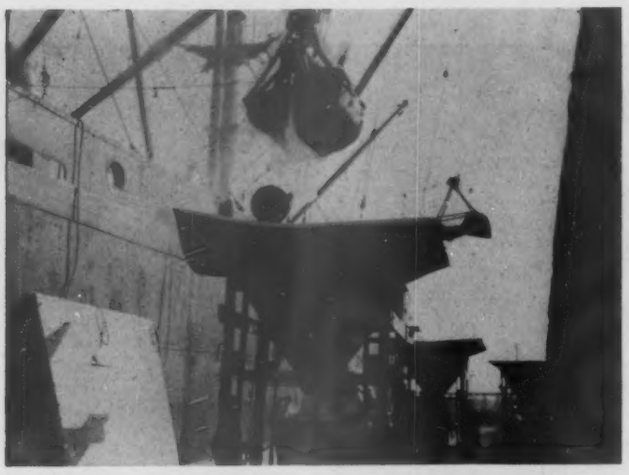




Above—Sacks go by belt conveyor from stitching machines to waiting flat bed-electric powered trucks for transportation to cars



Right—Palletized loads come over the side of the ship to fork trucks which take them to the warehouse



Clamshell unloads potash into hopper whence it goes into electric-powered dump trucks

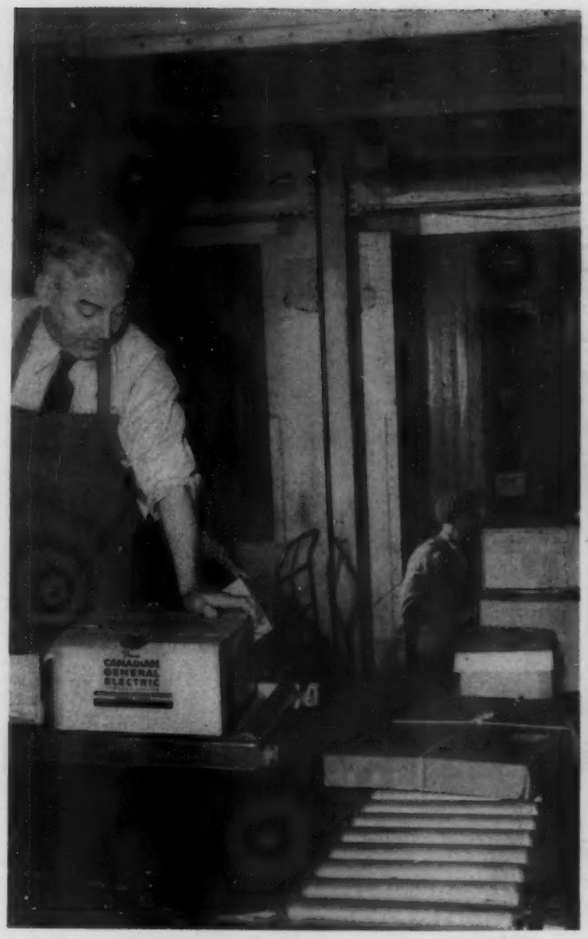
Hough "Payloader" fills bucket to be picked up by fork truck and taken to freight car where the bucket will be dumped

cotton piece goods, kraft paper, pulpboard, lumber and naval stores, all of which are seen on the Central of Georgia's docks for brief intervals while awaiting stowage on shipboard. American lines which are regular callers at Savannah and furnish convenient connections for the railroad are Moore-McCormack Lines, South Atlantic Steamships, the Bull Line, Wilhelmsen Line and the Lykes Steamship Company. The Isbrandtsen Steamship Lines are occasional callers, both inbound and outbound, while the Isthmian Steamship Company calls at Savannah only to bring in materials. The 32 ft. of water at the piers, and the 7 ft. tide allow really large ships to use the piers.

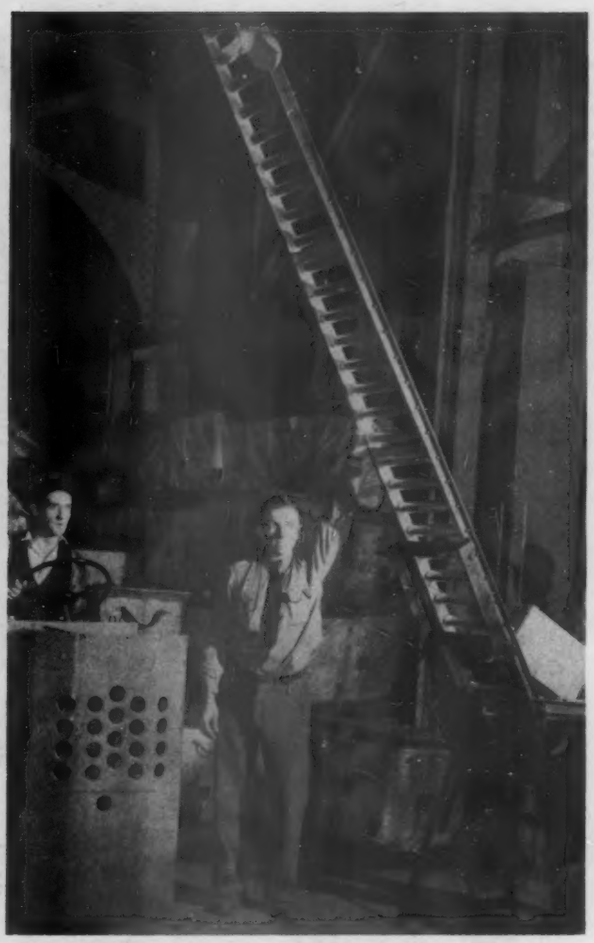
Perhaps the most specacular operation at Savannah is the unloading of nitrate of soda from ships to the conveyor, and thence to storage. This operation is explained in the accompanying illustrations. The maximum capacity of this conveyor is 600 tons per hour, although Central of Georgia officers say it never has been put to the "supreme" test. The general rate of operation runs between 180-300 tons per hour. The length of the shipside section of the conveyor is about 360 ft., allowing long ships to discharge their cargoes with a minimum of delay.

Potash is handled in a manner somewhat different from that used to unload nitrate from ships or load it in cars. This is a necessity since the facilities used for the unloading and storage of the nitrate generally are occupied by that commodity. Power dump trucks, "Payloaders" and fork-lift trucks with special bucket attachments take care of the potash after it comes over the ship's side. About 170 tons per hour can be handled by the potash facilities.

Dock space for the storage of packaged materials is ample, and one pier has an enclosed dock for all-weather loading of such freight. The fork truck-pallet system is widely used at this point.



Here a portable, sectionalized aluminum conveyor has been set up in the car with other sections leading from the car to the warehouse where men are waiting to make the necessary separations



In order to allow automotive equipment to use the platform, certain sections of the conveyors are counterbalanced so that one end can be raised to allow the vehicles to pass

Conveyors Handle Express Faster

Canadian Pacific Express system built around portability of units used in car to car, car to warehouse and truck to warehouse movements

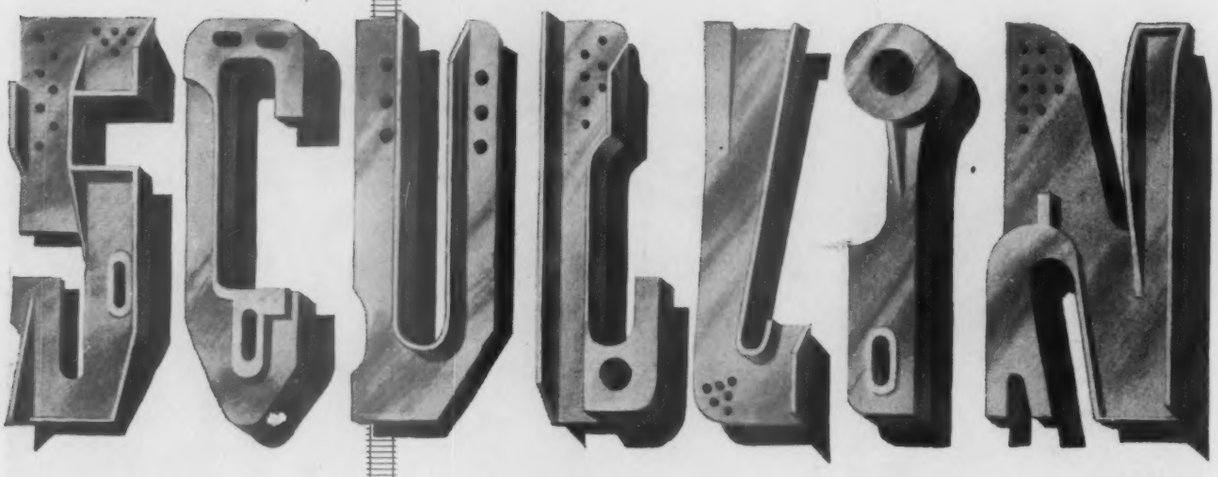
Aluminum roller conveyors are used extensively by the Canadian Pacific Express Company to speed up the handling of traffic in its more important terminals. Useful mainly where a heavy volume of traffic is handled, the lightweight, portable conveyors can reduce the unloading time of one express car by as much as 30 minutes.

For example, in the Canadian Pacific's Windsor Station at Montreal, immediately after the arrival of Train 22 from Toronto, the conveyors are set up in the cars and from the cars into the warehouse. Use of this equipment expedites the movement of express through the terminal, since it cuts down the unloading time per car, does away with the necessity for expressmen carrying parcels any distance and reduces the lifting of parcels. Also cut is the sorting time, for sorters are supplied with an almost continuous stream of parcels which they can mark and send along other conveyors to the proper sections of the warehouse, ready for delivery.

In addition, the conveyors can be laid along the floors of both express cars and motor trucks to facilitate loading and unloading. They can be set up to lead from the tailgates of trucks into the warehouse, from car to car, or serve as a conveyor link inside the warehouse itself. In short, the aluminum conveyor acts much as a fixed conveyor does. However, there is the added advantage that one man can pick up a section and place it anywhere it may prove useful, either by itself or with other sections.

The direct savings resulting from the use of the conveyors include time and effort. Indirectly, they reduce the chances of employee injury and of damage to express shipments. In some cases, by speeding the unloading, sorting and loading of express onto motor trucks, they allow the trucks to get out on delivery in time to miss city traffic rush hours.

for *safe* speed...
steadfast stamina...specify



STEEL
CASTINGS

FREIGHT CAR TRUCK SIDE FRAMES AND BOLSTERS

LOCOMOTIVE CASTINGS OF EVERY KIND

ALL TYPES OF UNDERSTRUCTURE CASTINGS FOR FREIGHT CARS

SCULLIN STEEL CO.
SAINT LOUIS 10, MISSOURI

NEW YORK • CHICAGO • CLEVELAND • BALTIMORE • RICHMOND, VA. • MEXICO CITY, D. F.

Equipment Orders Total $365,030,000 in First Six Months

Orders include 1,164 Diesel units, 38,280 freight-train cars and 14 passenger cars

Equipment purchases by domestic railroads and private car lines in the first half of 1950 took a sharp upward turn compared with 1949. Orders have been placed so far this year for 1,164 Diesel-electric locomotives units, 38,280 freight-train cars and 14 passenger cars, according to reports published in *Railway Age* through the issue of June 24. (Orders placed for additional equipment since that issue went to press are listed in this issue's Equipment and Supplies column.)

These totals compare with those reported for the first six months of 1949 when, according to the American Railway Car Institute, orders were placed by domestic railroads and private car lines for 3,036 freight-train cars and 50 passenger cars, while *Railway Age*, for the same period, reported domestic orders for 481 Diesel-electric locomotive units and 13 steam and 7 electric locomotives.

The estimated cost of the locomotives for which orders were reported up to June 24 this year is $164,876,000; of the freight-train cars, $198,290,000, and of the passenger cars, $1,864,000, a total commitment of $365,030,000. The cost of all equipment ordered in last year's first half, according to a *Railway Age* estimate, was $93,810,000, approximately 25 per cent of the cost of equipment ordered in the comparable 1950 period. Included in the totals for 1950 is the following equipment reported ordered, at the indicated estimated costs, in the four June issues of *Railway Age*: 220 Diesel-electric locomotive units ($29,915,000), 617 freight cars ($3,525,000), and one passenger car ($129,000). All orders reported so far this year are listed by purchaser in the accompanying table. Significant relationships between these expenditures for equipment and the railroads' income are explored in this issue's lead editorial, which appears on page 11.

The first half of the current year witnessed the introduction by the Equitable Life Assurance Society of its plan to purchase freight cars from manufacturers and lease them to railroads (see *Railway Age* of April 1, page 61). Under the plan Equitable buys cars from the builder and pays 80 per cent of their cost as they are delivered. The remaining 20 per cent is paid in equal installments over a 5-year period as Equitable receives rent for the cars. Rentals paid Equitable by the railroads vary with the type of car leased, but reportedly they will be substantially less than the $1.75 per diem railroads receive for their own cars when off home rails. When the initial 15-year rental period is over the terms of the agreements provide that the railroad may return the cars to Equitable or lease them, at 20 cents per car per day for an additional period up to 10 years. Responsibility for maintenance of the cars throughout the lease period rests with the railroads. Up to the time this issue went to press five railroads had consummated leasing agreements with Equitable for a total of 13,500 cars (see the accompanying table), the largest of which was that with the Pennsylvania for 10,000 cars. Other similar agreements are pending.

Diesel locomotives also may be leased from Equitable under conditions basically like those prevailing for freight-car leasing, if current negotiations are consummated. Terms of the locomotive-leasing plan call for payment to the builder by Equitable of 90 per cent of the cost as the equipment is delivered, with the remaining 10 per cent coming out of quarterly rentals paid to Equitable by the railroads during the first 5 years of leasing. If the railroads elect to retain the equipment after the initial 15-year period rentals will be $350 per unit each 3 months. Thus far no locomotive-leasing agreement has been signed, although Thomas I. Parkinson, president of Equitable, said the insurance firm is working out contracts with several railroads and locomotive builders.

The latest figures available from the Car Service Division of the Association of American Railroads indicate that during the week ended June 10 Class I railroads had a daily average *net* car shortage of 1,815 box cars, 2,100 gondola cars, 821 hopper cars and 382 flat cars. For the same period net surpluses were reported of 2,961 stock cars, 1,349 refrigerator cars and 317 cars of other types.

Equipment Orders—First Half, 1950

FREIGHT CARS

Purchaser	No.	Type	Builder
Atchison, Topeka & Santa Fe	500	50-ton Box	Pullman-Standard
Bangor & Aroostook	300	Paper & Insulated Heater	Magor
Central of Pennsylvania	125	70-ton Hopper	Bethlehem Steel
Chicago, Burlington & Quincy	1,900	50-ton Box	R. R. Shops
	600	70-ton Triple Hopper	R. R. Shops
	200	70-ton Hopper	R. R. Shops
Chicago & Eastern Illinois	25	70-ton Cov. Hopper	Pullman-Standard
Chicago, Rock Island & Pacific	1,000	50-ton Box	Amer. Car & Fdy.
Delaware, Lackawanna & Western	300	70-ton Cov. Hopper	Amer. Car & Fdy.
Detroit, Toledo & Ironton	250	50-ton Box	Greenville
Equitable Life Assurance Society	500(d)	50-ton Box	Pullman-Standard
	700(a)	50-ton Pulpwood	Pullman-Standard
	600(a)	70-ton Cov. Hopper	Pullman-Standard
	200(g)	50-ton Box	Pullman-Standard
	3,000(p)	70-ton Gondola	Pullman-Standard
	2,000(p)	70-ton Gondola	Bethlehem Steel
	2,000(p)	50-ton Box	Pressed Steel
	1,500(p)	50-ton Box	Amer. Car & Fdy.
	1,000(p)	50-ton Box	General American
	500(p)	50-ton Box	Greenville
	1,500(n)	55-ton Box	Pullman-Standard
Fruit Growers Express	100	50-ton Refrig.	Co. Shops
General American		50-ton "D-F" Box	Gen. Amer.-Evans
Gulf, Mobile & Ohio	100	70-ton Cov. Hopper	Amer. Car & Fdy.
Lake Superior & Ishpeming	50	55-ton Box	Pullman-Standard
Lehigh & New England	35	70-ton Cov. Hopper	Bethlehem Steel
Lehigh Valley	500	50-ton Box	Pullman-Standard
	1,000	50-ton Box	Bethlehem Steel
	100	70-ton Cov. Hopper	Bethlehem Steel
	50	70-ton Flat	R. R. Shops

(d)To be leased to the Delaware & Hudson
(a)To be leased to the Atlantic Coast Line
(g)To be leased to the Green Bay & Western
(p)To be leased to the Pennsylvania
(n)To be leased to the New York Central

Purchaser	No.	Type	Builder
Louisville & Nashville	1,000	50-ton Box	Pullman-Standard
Mather Stock Car ..	130	40-ft. Beef Refrig.	Co. Shops
Minneapolis, St. Paul & Sault Ste. Marie	75	70-ton Cov. Hopper	Amer. Car & Fdy.
Missouri-Kansas-Texas	500	50-ton Box	Amer. Car & Fdy.
	100	70-ton Cov. Hopper	Pullman-Standard
Missouri Pacific ...	810	70-ton Hopper	R. R. Shops
	500	50-ton Box	R. R. Shops
New York Central..	1,500	55-ton Box	Despatch Shops
	1,500	70-ton Gondola	Despatch Shops
Norfolk & Western.	1,000	70-ton Hopper	R. R. Shops
Northern Pacific....	500	50-ton Box	R. R. Shops
	50	Caboose	R. R. Shops
Reading	1,000	50-ton Hopper	Bethlehem Steel
	500	50-ton Box	Amer. Car & Fdy.
St.Louis-San Francisco	135	70-ton Cov. Hopper	Pullman-Standard
Seaboard Air Line..	500	70-ton Phosphate	Pullman-Standard
Spokane Int'l	23	70-ton Cov. Hopper	Amer. Car & Fdy.
	12	Caboose	No. Pac. Shops
Southern Pacific	2,000	50-ton Box	Pullman-Standard
	1,000	50-ton Auto	R. R. Shops
	100	70-ton Gondola	Ralston
Union Pacific	2,500	50-ton Box	R. R. Shops
	500	40-ton Stock	R. R. Shops
	1,000	50-ton Gondola	General American
Western Fruit Express	450	50-ton Refrig.	Pac. Car & Fdy.
	50	Refrig.	Co. Shops
Wilson Car Lines ..	100	40-ton Refrig.	Co. Shops

LOCOMOTIVES

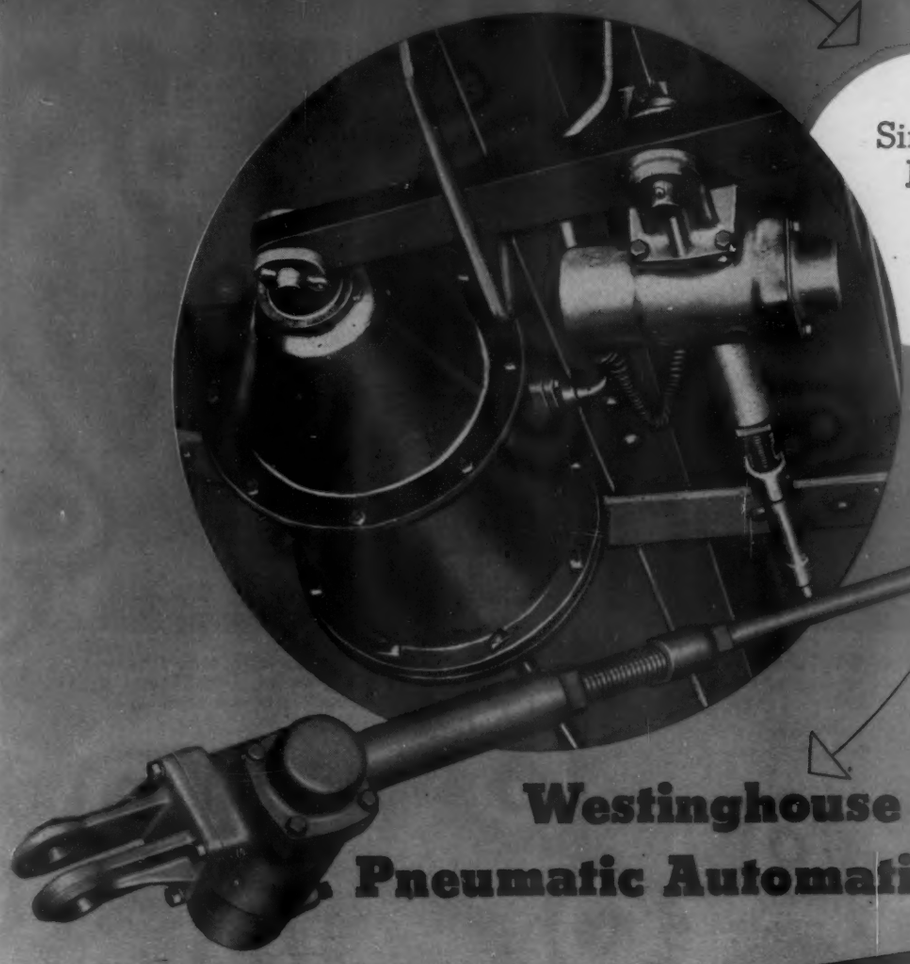
Purchaser	No.	Type	Builder
Baltimore & Ohio..	34	1,500-hp. frt.	Electro-Motive
	10	Switch.	Fairbanks, Morse
Bessemer & Lake Erie	14	1,500-hp. road	Electro-Motive
	5	1,500-hp. rd.-sw.	Baldwin
Boston & Maine	4	1,500-hp. frt.	Electro-Motive
	8	1,500-hp. rd.-sw.	Electro-Motive
	8	1,000-hp. switch.	American-G.E.
	4	600-hp. switch.	American-G.E.
Central of Georgia	2	2,000-hp. pass.	Electro-Motive
	2	1,500-hp. switch.	Electro-Motive
	3	1,500-hp. switch.	American-G.E.
Central of N. J. ..	8	1,500-hp. gen. svce. unit.	American-G.E.
	5	1,000-hp. switch.	American-G.E.
	4	1,500-hp. gen. svce. unit.	Fairbanks, Morse
	4	1,000-hp. switch.	Electro-Motive
	3	1,000-hp. switch.	Baldwin
Chesapeake & Ohio	5	1,200-hp. switch.	G.M. Diesel, Ltd.
	16	1,500-hp. rd.-sw.	G.M. Diesel, Ltd.
	18	1,600-hp. switch.	Baldwin
Chicago & North Western	36	1,500-hp. "A" frt.	Electro-Motive
	4	2,250-hp. "A" pass.	Electro-Motive
	3	1,600-hp. rd.-sw.	American-G.E.
	10	1,000-hp. switch.	American-G.E.
	6	1,600-hp. rd.-sw.	Fairbanks, Morse
	2	1,200-hp. switch.	Fairbanks, Morse
Chicago, Rock Island & Pacific..	12	1,500-hp. rd.-sw.	Electro-Motive
	1	2,250-hp. pass.	Electro-Motive
	3	800-hp. sw.	Electro-Motive
	2	800-hp. sw.	Lima-Hamilton
	2	1,000-hp. sw.	Davenport-Bessler
Cincinnati Union Terminal	2	750-hp. switch.	Lima-Hamilton
Clinchfield	6	1,200-hp. switch.	Electro-Motive
Delaware & Hudson	18	1,000-hp. sw.	American-G.E.
	16	1,500-hp. rd.-sw.	American-G.E.
Erie	28	1,500-hp. rd.-sw.	Electro-Motive
	1	1,000-hp. switch.	Electro-Motive
	5	1,000-hp. rd.-sw.	Electro-Motive
	16	1,500-hp. rd.-sw.	American-G.E.
	2	4-unit 6,000-hp. frt.	American-G.E.
	11	1,500-hp. rd.-sw.	Baldwin
	6	1,000-hp. switch.	Lima-Hamilton
Gulf, Mobile & Ohio	4	1,600-hp. rd.-sw.	American-G.E.
	4	1,600-hp. "B" units	American-G.E.
	4	1,500-hp. "B" units	Electro-Motive
Indianapolis Union..	5	1,000-hp. switch.	Fairbanks, Morse
Lehigh Valley	6	1,600-hp. "A" frt.	American-G.E.
	2	1,600-hp. "B" frt.	American-G.E.
	4	1,600-hp. switch.	American-G.E.
	4	1,200-hp. switch.	American-G.E.
	14	1,200-hp. switch.	Baldwin
	4	1,500-hp. "A" frt.	Electro-Motive
	2	1,500-hp. "B" frt.	Electro-Motive
	2	660-hp. switch.	Electro-Motive
Louisville & Nashville	34	1,500-hp. "A" frt.	Electro-Motive
	3	1,500-hp. "B" frt.	Electro-Motive
	6	1,100-hp. switch.	Electro-Motive
	9	660-hp. switch.	American-G.E.
Maine Central.....	8	1,500-hp. rd.-sw.	Electro-Motive
	3	1,200-hp. switch.	Electro-Motive
	2	1,000-hp. switch.	American-G.E.
Missouri-Kansas-Tex.	2	3-unit 4,500-hp. pass.	American-G.E.
	2	1,600-hp. rd.-sw.	American-G.E.
	8	1,600-hp. rd.-sw.	Baldwin
Missouri Pacific	11	1,000-hp. switch.	Baldwin
	31	1,500-hp. frt.	Electro-Motive
	2	1,500-hp. pass.	Electro-Motive
	4	2,250-hp. pass.	Electro-Motive
	5	1,200-hp. switch.	Electro-Motive
	5	1,500-hp. switch.	Electro-Motive
	15	1,500-hp. frt.	American-G. E.
	4	2,000-hp. pass.	American-G. E.
Nashville, Chattanooga & St. Louis	16	1,500-hp. rd.	Electro-Motive
	17	1,500-hp. rd.-sw.	Electro-Motive
	10	1,200-hp. switch.	Electro-Motive

Purchaser	No.	Type	Builder
New York Central..	4	2,250-hp. "A" pass.	American-G.E.
	8	1,500-hp. rd.-sw.	American-G.E.
	19	1,000-hp. switch.	American-G.E.
	30	600-hp. switch.	American-G.E.
	12	1,500-hp. rd.-sw.	Electro-Motive
	6	1,200-hp. switch.	Electro-Motive
	18	1,000-hp. switch.	Electro-Motive
	2	800-hp. switch.	Electro-Motive
	12	600-hp. switch.	Electro-Motive
	16	1,000-hp. rd.-sw.	Lima-Hamilton
	10	1,000-hp. switch.	Fairbanks, Morse
New York, Chicago & St. Louis	4	1,200-hp. switch.	Lima-Hamilton
	3	1,200-hp. switch.	Electro-Motive
	2	1,000-hp. switch.	American-G.E.
	1	660-hp. switch.	American-G.E.
New York, New Haven & Hartford	20	1,600-hp. rd.-sw.	American-G.E.
	10	1,600-hp. rd.-sw.	Fairbanks, Morse
	10	1,200-hp. switch.	Lima-Hamilton
Seaboard Air Line..	30	1,500-hp. road	Electro-Motive
	29	1,600-hp. road	American-G.E.
	3	1,000-hp. switch.	Baldwin
Southern	16	1,600-hp. rd.-sw.	American-G.E.
	24	1,500-hp. frt. & pass. road units	Fairbanks, Morse / Electro-Motive
	21	1,500-hp. rd.	Electro-Motive
Southern Pacific....	22	4-unit 6,000-hp. frt.	Electro-Motive
	2	4-unit 6,000-hp. pass.	American-G.E.
	12	1,500-hp. freight	Baldwin
Texas & Pacific ...	19	1,500-hp. frt.	Electro-Motive
	4	1,200-hp. sw.	Electro-Motive
Union Pacific	10	2,250-hp. pass.	Electro-Motive
	25	1,200-hp. term. sw.	Electro-Motive
Wabash	1	3-unit 4,500-hp. frt.	Electro-Motive
	15	2-unit 3,000-hp. frt.	Electro-Motive
	3	1,500-hp. rd.-sw.	Electro-Motive
	8	1,200-hp. switch.	Electro-Motive
	2	800-hp. switch.	Electro-Motive
	10	2-unit 3,000-hp. frt.	G.M. Diesel, Ltd.
	1	1,500-hp. rd.-sw.	G.M. Diesel, Ltd.
	3	800-hp. switch.	G.M. Diesel, Ltd.
	7	1,200-hp. switch.	Lima-Hamilton

Passenger Cars

Purchaser	No.	Type	Builder
Chicago & North Western	2	Rail Diesel Car 1	Budd
	1	Rail Diesel Car 2	Budd
New York Central ..	2	Rail Diesel Car 1	Budd
	1	Rail Diesel Car	Budd
Pennsylvania-Reading Seashore Lines ..	6	Rail Diesel Car 1	Budd
Western Pacific....	2	Rail Diesel Car 2	Budd

A FRIENDSHIP FIRMLY FOUNDED

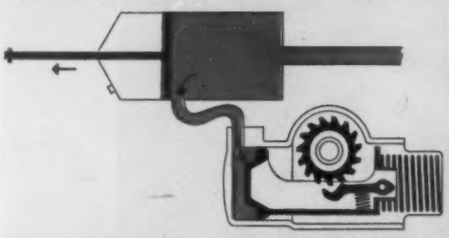


Simple and Positive in Action

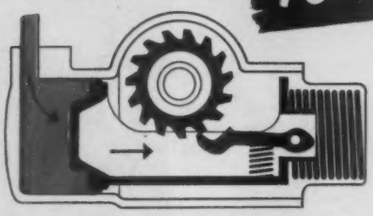
Design Proved in years of Passenger Service

Westinghouse Type "D" Pneumatic Automatic Slack Adjuster

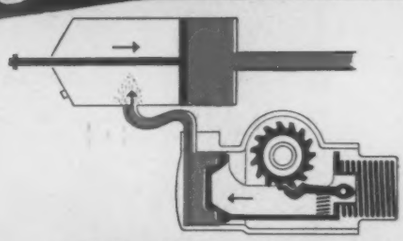
For Freight Cars



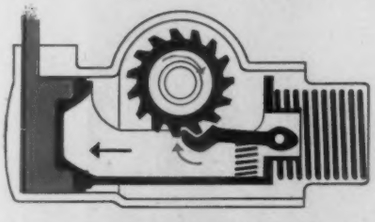
Excess Brake Cylinder Piston Travel uncovers port—admits air to slack adjuster cylinder.



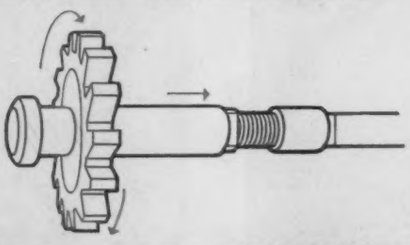
Air moves piston, and associated parts, compressing spring.



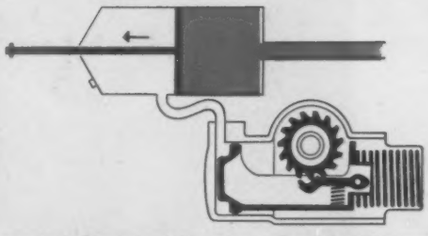
When brake is released, air in adjuster cylinder is vented, and spring returns piston.



Upon return of piston, pawl advances Ratchet Nut one tooth.



Movement of nut shortens tie-rod connection, taking up slack.



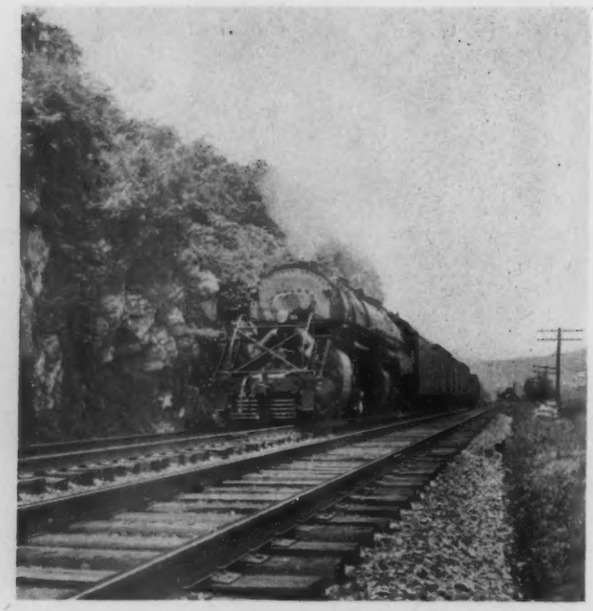
Action occurs with each brake application, maintaining piston travel at proper value.

Ask for Leaflet 2468

Westinghouse Air Brake Co.

WILMERDING, PA.

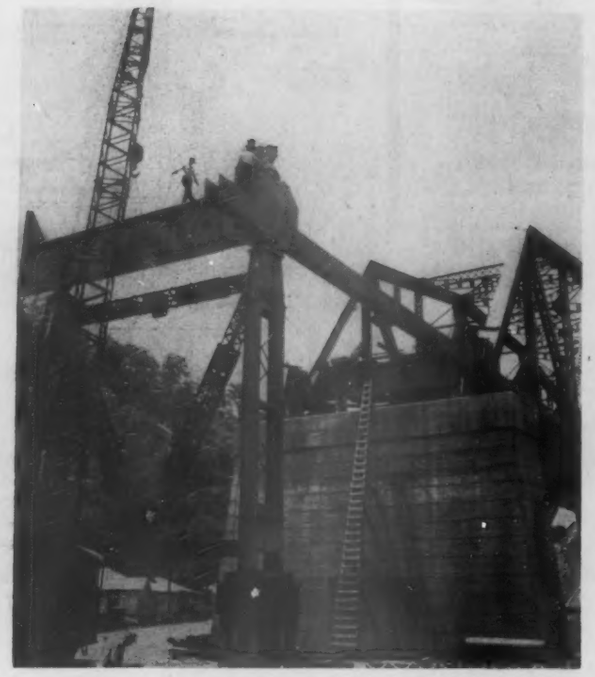
"Hero" of the new movie is N. & W. box car 50450, shown here being "shot" at Columbus, Ohio, one of the road's western terminals



A new heavy-duty N. & W. Y-6-b locomotive speeds along the border of Virginia and West Virginia. . . . You'll see the camera crew on the cliff, in the upper left-hand corner

"OPERATION FAST FREIGHT"

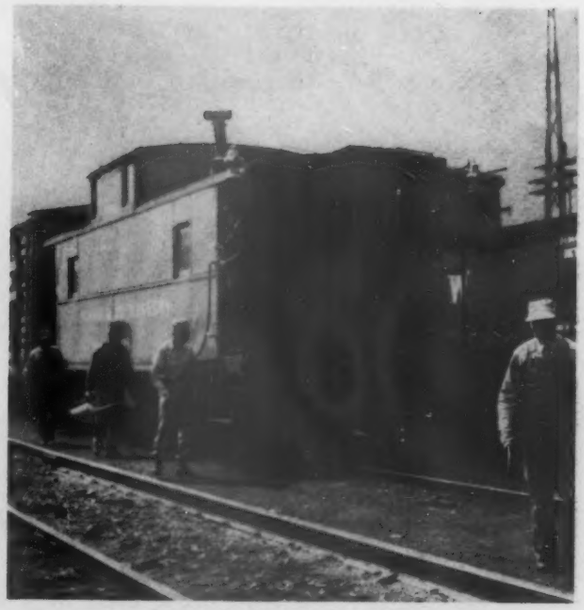
Norfolk & Western's newest movie is a 25-minute color documentary on merchandise freight railroading



High steel men swing girders into place for a new bridge along the N. & W.

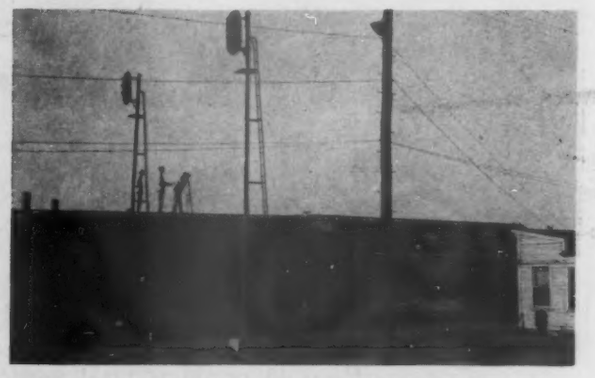
Engineers study blueprints at the rugged entrance to the N. & W.'s $12,000,000 Elkhorn tunnel

An N. & W. Class A locomotive leaves Portsmouth, Ohio, yard as movie cameramen shoot from the signal (top, left, of picture)



Early morning train inspection scene in Williamson yard, Williamson, W. Va., assembly point for bituminous coal hauled by the N. & W.

Principal products hauled by the N. & W.—from automobiles to soda crackers—appear in "Operation Fast Freight"



Cameraman and crew ride the top of Time Freight No. 86 over the hump in Roanoke yard, Roanoke, Va.

Cameramen photograph N. & W. engineering specialists at the entrance to "the largest double-track railroad tunnel in the world"

Smooth - Effortless Braking

THE INTERNATIONAL

THE RED RIVER

on the INTERNATIONALS and the RED RIVER

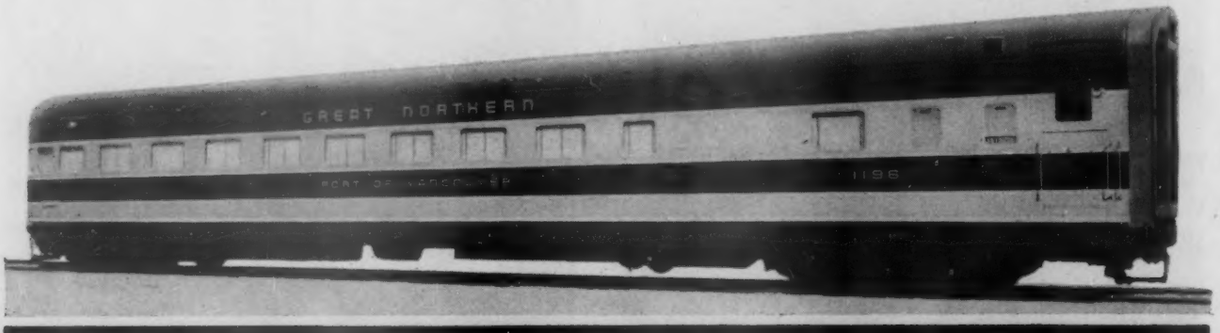
The Red River Limited making its fast run between St. Paul and Grand Forks. Photo, courtesy Great Northern Railway.

Equipped with the most modern available appointments for travel pleasure, comfort and safety, these modern trains are earning the good will of the traveling public in both Canada and the United States. Thus the Great Northern again leads the way in providing ideal standards of convenience and riding ease for its patrons.

Like the Great Northern's world-famous "Empire Builder," these fast new trains are equipped with New York "HSC" Brakes. These rapid, uniform-acting brakes play a vital role not only in assuring dependable stops, but in maintaining the high average speeds which are achieved on these runs.

"HSC" BRAKE

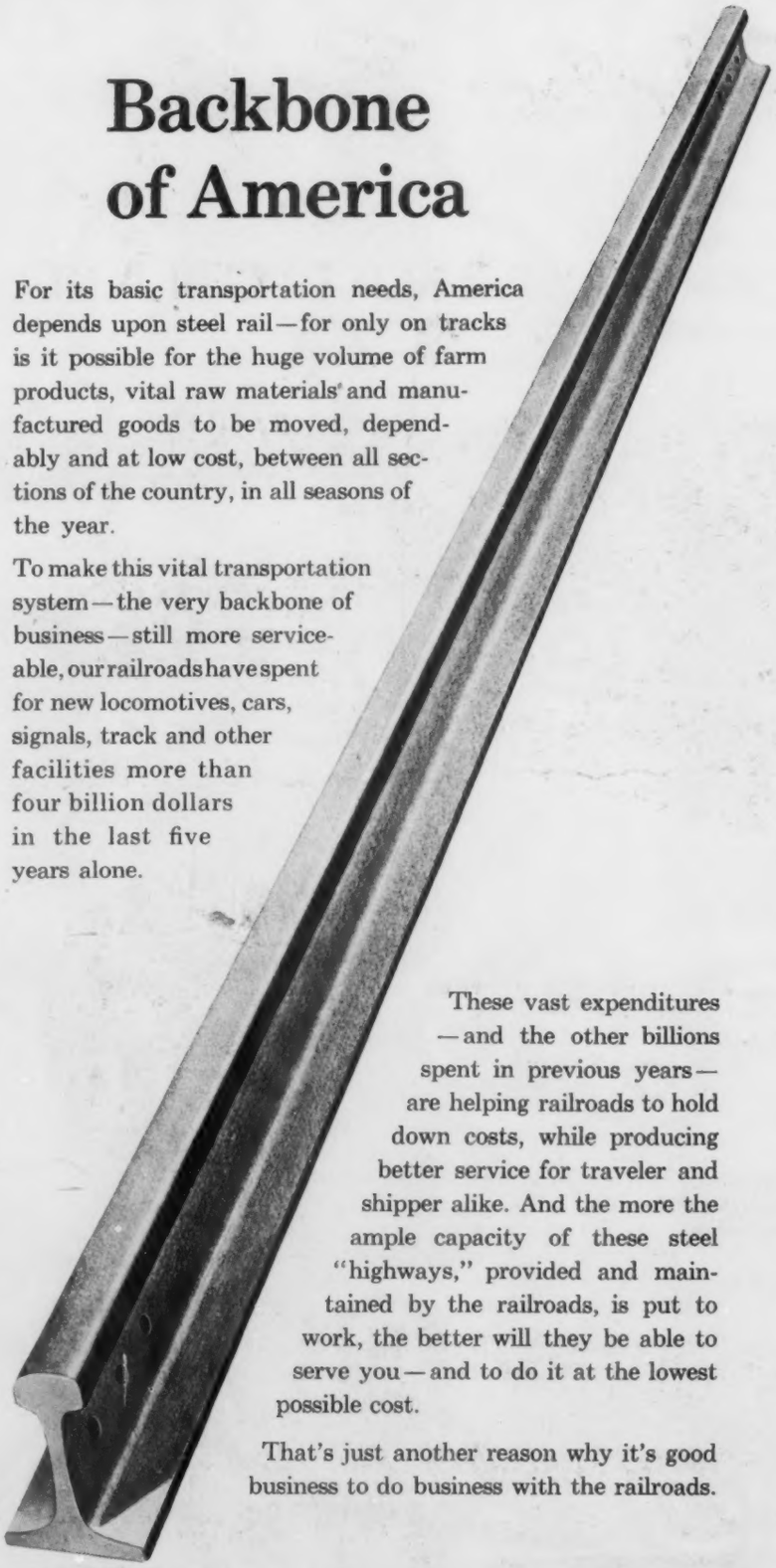
Observation car of one of the two Internationals operating between Vancouver and Seattle.



The New York Air Brake Company

420 Lexington Ave., New York 17, N.Y. Plant: Watertown, N.Y.

Backbone of America



For its basic transportation needs, America depends upon steel rail—for only on tracks is it possible for the huge volume of farm products, vital raw materials and manufactured goods to be moved, dependably and at low cost, between all sections of the country, in all seasons of the year.

To make this vital transportation system—the very backbone of business—still more serviceable, our railroads have spent for new locomotives, cars, signals, track and other facilities more than four billion dollars in the last five years alone.

These vast expenditures—and the other billions spent in previous years—are helping railroads to hold down costs, while producing better service for traveler and shipper alike. And the more the ample capacity of these steel "highways," provided and maintained by the railroads, is put to work, the better will they be able to serve you—and to do it at the lowest possible cost.

That's just another reason why it's good business to do business with the railroads.

ASSOCIATION OF AMERICAN RAILROADS
WASHINGTON 6, D. C.

Listen to THE RAILROAD HOUR every Monday evening on NBC

YES!

it is good business to do business with the railroads.

CF&I is proud of its part in serving this backbone industry of our nation.

CF&I RAILS & FASTENINGS

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10
SOUTHERN
LINES
PACIFIC
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Winning Passengers Back to the Rails

with the Southern Pacific "SHASTA DAYLIGHT"

The Southern Pacific is proving that up-to-date equipment, improved scheduling, and competitive merchandising of service is the way to retain and increase passenger revenues.

Last year the S. P. invested $5,000,000 in the modern, completely equipped "Shasta Daylights." The two trains, among the best paying trains on the railroad, are expected to gross over $3,000,000 a year.

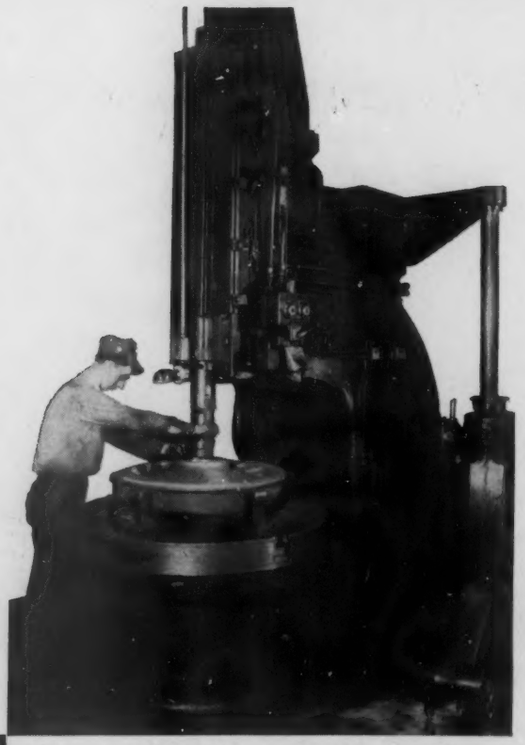
Thus, the Southern Pacific is proving that such modern equipment, hauled by modern locomotives, is one sure way to retain and build passenger business.

Recently, additional Alco-GE passenger locomotives were ordered by the railroad—further substantial proof of their earning power.

AMERICAN LOCOMOTIVE
and
GENERAL ELECTRIC

113-244

Where chilled car wheels are on the spot



Above—AMCCW chilled car wheels are bored faster, more easily, with less wear on cutting tools, than any other type of car wheel—a saving in time, temper, and equipment. A micrometer is used to measure the bore to the last thousandth of an inch.

Left—The AMCCW wheels are pressed on the axle, one at a time, usually under 50 to 60 tons pressure. Then the pressman measures at least three points around the mounted wheels to check for accuracy of gage, alignment, and direction of bore.

On the spot is right! Wheel Shop men can tell you quicker than anybody else how AMCCW chilled car wheels are easier to bore, with greater speeds and feeds . . . how they save time and expensive equipment . . . how they mount with a firm grip under 50 to 60 tons pressure.

Chilled car wheels are not only easier to mount, they make better safety records because iron *likes* to cling to steel. That's why AMCCW wheels are the most popular ones in the Wheel Shop, where they're really on the spot.

AMCCW

Low first cost
Low exchange rates
Reduced inventory
Short haul delivery
Increased ton mileage
High safety standards
Complete AMCCW inspection
Easier shop handling

ASSOCIATION OF MANUFACTURERS OF CHILLED CAR WHEELS

445 North Sacramento Boulevard, Chicago 12, Ill.

American Car & Foundry Co. • Southern Wheel (American Brake Shoe Co.)
Griffin Wheel Co. • Marshall Car Wheel & Foundry Co. • New York Car Wheel Co.
Pullman-Standard Car Mfg. Co.

Racor Switch Point Locks

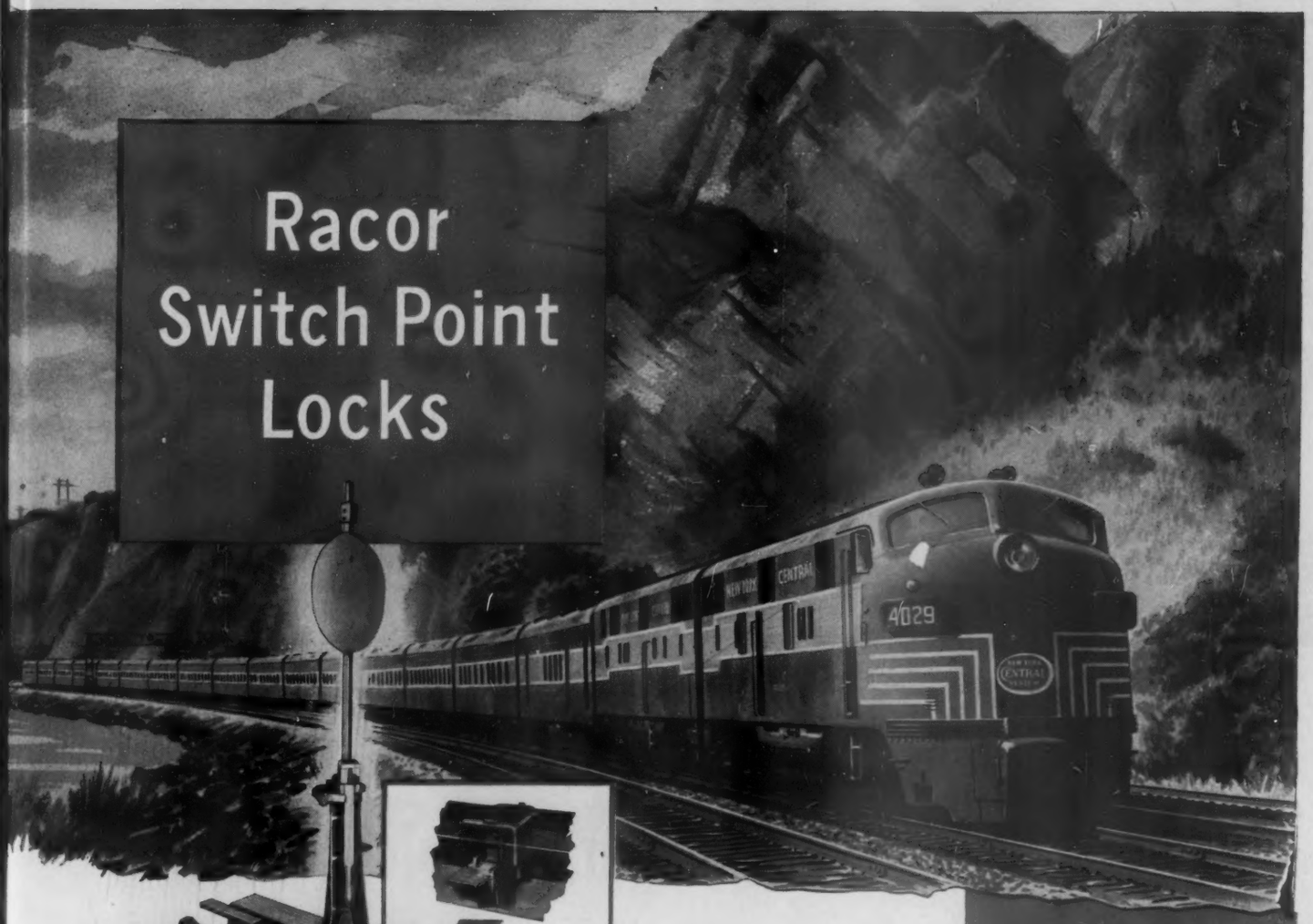


Fig. 3911
SWITCH POINT LOCK
(Patented)

Provide added protection for New York Central's passenger train operation.

Essential to the safe operation of these trains, facing point switches must be secured in a closed position, regardless of failure or damage to the throwing mechanism. Racor Switch Point Locks can be installed with all designs of main line switch stands. Ruggedly designed — easily installed below top of ties as protection against damage, they function independently of stand.

Fig. 3911 (illustrated) for use with all types of column throw stands.

Fig. 3912 available for use with all types of ground throw stands.

America's most complete line of track specialties

- AUTOMATIC SWITCH STANDS
- VERTICAL SWITCH RODS
- SAMSON SWITCH POINTS
- SWITCH POINT LOCKS
- RAIL LUBRICATORS
- DEPTH HARDENED CROSSINGS
- REVERSIBLE MANGANESE STEEL CROSSINGS
- MANGANESE STEEL GUARD RAILS

AMERICAN Brake Shoe COMPANY

RAMAPO AJAX DIVISION
109 North Wabash Avenue, Chicago 2, Ill.

RACOR

"The Red River" (above) and two "Internationals" inaugurated new services on the Great Northern in June

New Passenger Trains on Great Northern

Two between Seattle and Vancouver, and one between Grand Forks and the Twin Cities, provide fast, de luxe daytime service—Cars built by American Car & Foundry

During June the Great Northern inaugurated new passenger-train services between Seattle, Wash., and Vancouver, B. C., and between Grand Forks, N. D., and Minneapolis-St. Paul, Minn. For these two services equipment for three trains was delivered to the railroad by the American Car & Foundry Co. The cars include three mail-baggage cars, seven coaches, two cafe-coach cars, two parlor-lounge cars, and one cafe-parlor car.

Two of the trains, known as "The Internationals," went into service between Seattle and Vancouver on Sunday, June 18, where they make a total of three round trips between the two cities daily. This is an increase in the service of one round trip daily. The trains now depart from Seattle at 7:45 a.m., 1:30 p.m., and 6 p.m., and from Vancouver at 8:10 a.m., 12:30 p.m., and 6:25 p.m., respectively. The schedule time for all trains for the 155 miles in each direction, including six intermediate stops, is 3 hr. 55 min. Prior to the inauguration of the new trains the service comprised morning and evening trains in each direction, those operating northbound on a 4-hr. 30-min. schedule; southbound, on 4-hr. 25-min. and 4-hr. 20-min. schedules.

Each of the new "Internationals" is made up of a mail-baggage car, two coaches, a cafe-coach car, and a parlor-lounge car. Each coach seats 60 passengers and there are coach seats for 28 in the cafe-coach. The parlor-lounge car provides parlor-car seats for 29. The dining room in the cafe-coach seats 24.

The third train, known as "The Red River," which went into service on Sunday, June 25, provides a new service from Grand Forks and important intermediate points to Minneapolis-St. Paul in the morning and a return service to Grand Forks in the evening. Routed by way of Fargo and St. Cloud, the train leaves Grand Forks at 7:30 a.m. The return trip departs from St. Paul at 5:30 p.m. The schedule for the 320 miles in each direction, including eight intermediate stops and two flag stops west of Minneapolis, is 6 hr. between Grand Forks and Minneapolis and 30 min. between Minneapolis and St. Paul.

This train consists of one mail-baggage car, three 60-passenger coaches, and a cafe-parlor car which provides 20 parlor-car seats, seats for 12 in the dining room, and seats for 9 in the coffee shop.

Each of the three trains is powered by a single-unit Electro-Motive 2,000-hp. Diesel-electric locomotive. The cars and locomotives for the three trains represent an investment by the railroad of $1,902,000.

The exteriors of all the trains are finished in olive green and deep orange. The skirt, a broad band below the windows, the roof, letter board, and ends of the cars are green, with the lower portion of the side sheathing and panels in the window area orange. The striping above and below the windows and between the two colors on the sides of the car below the windows is in imitation gold. Lettering and numbering are in imitation gold

Variations in upholstery and in color of pier panels at the ends and center of the coaches relieve monotony in the long passenger compartments. Patterns in the upholstery are symbolic of the territories through which the trains operate — wheat in the coaches of "The Red River" and pine trees in the coaches of "The Internationals"

The coffee shop of "The Red River" cafe-parlor car seen from the dining room. The kitchen is at the rear

In the parlor section of "The Red River" cafe-parlor car

The forward end of the parlor-lounge cars of "The Internationals." The bas-relief is carved myrtlewood

Edge-lighted frieze panels and myrtlewood bas-reliefs characterize the dining room of the cafe-coaches of "The Internationals"

color Scotchlite. A silver stripe is painted at the sill line. Trucks are black.

The coaches for all three trains have a main compartment with a seating capacity of 60. The seats are of the Sleepy-Hollow type with rotating frames and individually reclining backs. Cushions and backs are foam-rubber filled. Foot rests are adjustable. The men's lounge is at the vestibule end of the car; the women's lounge, at the opposite end. Between the men's lounge and the main compartment in one coach of each train is a conductor's room. In the other coaches this space is used as a luggage compartment.

The color scheme of the interiors of "The International" coaches is ivory, gray and ocher. That of the "The Red River" is cream, gold, gray and coral. In "The International" cars the ceilings are ivory; the frieze, including baggage rack, gray; the pier panels, gray and ocher, and the wainscot, gray. The floor is covered with marbleized rubber tile in patterns of black, gold and red, and red and white. Upholstery is brownish tan and green. In "The Red River" cars the ceilings are cream; frieze and wainscot, gray, and the pier panels, coral or gray. The floor covering is the same in all cars.

To break the monotony of the repetition of seats and pier panels in the long passenger compartment, the three end pier panels at each end of each side of the car are in one color, while the three central piers are in another color. All are covered with leather and divided into four equal areas with three horizontal stainless-steel snap-on moldings. Carrying out the same feature, the four seats at each end of each side of the car are upholstered in a color and texture contrasting with that on the seven seats at the center. In "The International" cars, the end pier panels are in biege and the center panels in golden ocher.

The upholstery on the end seats in these cars is a needlepoint in brownish tan, while that of the center seats is a smooth green with a silk screen print of a decorative pine tree in dark green and brown to symbolize the forests of the northwest. On "The Red River" cars the leather covering of end pier panels is gray and the central pier panels, coral. The upholstery on the end seats is gray petitpoint, while the remaining seats are in gold with a stencil print of a stylized head of wheat

On the four bulkheads of each "International" coach are reproductions of pen-and-ink drawings by Vincent Maragliotte, etched in stainless steel, a different drawing on each bulkhead. Themes of these decorative pieces are activities, points of interest, and industries of the Pacific northwest. Each etching is mounted on a panel of patterned stainless steel which serves as a mat for the decoration.

On the end bulkheads of "The Red River" coaches are edge-lighted engraved plastic murals, their themes drawn from the flowers of the country through which the train runs.

Cafe-Coaches

The cafe-coaches of the "Internationals" are divided into three compartments, including a coach section containing Sleepy Hollow seats for 28 passengers.

The kitchen is in the center of the car, with a passageway around it communicating with both end compartments. A propane-gas range and broiler, the principal piece of equipment, is surrounded with the usual adjuncts.

The third section is a dining room. Four square tables are placed diagonally along one side wall, with banquette seats holding two persons each behind them. On the aisle side are two chairs at each table. On the opposite side of the car the fixed seats are the same as on the other side, but the four tables are triangular and accommodate only two persons each.

The coach section of these cars has the same color scheme and decorative treatment as the full coaches. The dining section has a basic color scheme of green, gold and rust. The decorative theme is based on the fauna of the Pacific northwest, with the outstanding feature the engraved, edge-lighted frieze panels with a rhythmic pattern of flying ducks. The background for the plastic panels is gold. The pier panels of walnut Realwood Formica have small bas-reliefs, carved from Oregon myrtlewood, of wildlife indigenous to the Pacific northwest.

To add spaciousness to the room mirrors are used on the bulkheads at the locker end and on the wide partition at the kitchen end.

Light ocher leather is used on the diagonal banquette seats as a repeat of the gold in the frieze panels. A needlepoint type of upholstery in a light warm brown is used on the dining chairs. This color is a repeat in a higher value of the walnut pier panels. A complementary color note for the green ceiling and the green Moonglo Formica of the table tops is carried by the rust color carpet.

The lighting is from a side wall trough light, which also lights the plastic frieze panel, and from an indirect ceiling cove light.

Parlor-Lounge Cars

A compact arrangement of the facilities in the parlor-lounge cars of "The Internationals" utilizes every space. Because of the international run of this train, it was necessary to provide a hand-baggage inspection room and customs office in this car. The main part of the car is arranged as a parlor and lounge-observation room having a combined seating capacity of 29 persons. Occupying the tapered and rounded end of the floor space is a two-passenger settee upholstered in copper-rust color. Ahead of this are ten observation chairs placed back to back along the center line of the car. These are covered with green Velpoint. Between this group of observation chairs and the parlor section is a square table with Formica Moonglo top placed diagonally for convenience of the passengers. Facing the observation end is a copper-rust upholstered settee for two, while at the opposite side of the table are two chairs in gray. Separating this settee from the lounge at the end of the car is a low transparent partition of edge-lighted plastic. This panel is engraved on both sides to give a three-dimensional effect with a Douglas fir bough. This was executed by Henry F. Pearson, a specialist in plastic engraving.

In the main portion of the parlor-lounge are 17 Heywood-Wakefield parlor-car revolving chairs, nine covered in green and eight in gray, spaced on 40-in. centers along both sides of the car.

The floor of the parlor-lounge is covered with rust color carpet. All windows have Venetian blinds, except in the passageway where curtains are installed.

At the vestibule end there are two toilets on opposite sides of the car. These have ceramic tile floors. Next to the women's toilet is a customs office. In it are a table, a chair and hand-baggage racks. The electric locker takes up some space in one corner of this room. A small barroom is provided with a refrigerator, sinks and locker, all compactly arranged. The floor in this room is Monel metal covered with a wood rack.

There is a single-occupancy bedroom adjacent to the barroom with a bulkhead separating it from the parlor-lounge room. In it is a bedroom type sofa, the berth placed transversely.

As noted, the basic color scheme of these cars is green,

Principal Dimensions and Weights of the Cars in "The International" and "The Red River" Trains

Length over coupler pulling faces, ft.-in.	85–0
Truck centers, ft.-in.	59–6
Height, rail to top of floor, ft.-in.	4–3
Height, rail to top of roof, ft.-in.	13–6
Width over side sills, ft.-in.	10–0
Weights, ready for service, lb.:	
Mail-baggage	116 800
Coaches	135,600
Cafe-coaches	147,130
Cafe-parlor	142,430
Parlor-lounge	130,700

gray, tan and rust. The piers are of panelled Oregon myrtlewood and the wainscoting is covered with tan Tolex, a vinyl plastic material of high abrasive resistance. Being of a different texture, it breaks the monotony of wood surfaces and paint.

The principal decorative pieces in the car besides the pier panels are two myrtlewood bas-reliefs. One is a large sculpture covering the bulkhead at the forward end which symbolizes the principal industries of the Pacific northwest. The other is a small panel on the frieze over the body end door. A swimming salmon is the theme of this panel.

Cafe-Parlor Car

The two main compartments of the cafe-parlor car of "The Red River" are separated by a kitchen, around which is a passageway. The stainless-steel kitchen is equipped with a refrigerator, meat storage locker, dishwasher, work table, sink locker, and a propane-gas range and broiler.

Forward of the kitchen, with a shoulder-high double swinging door connecting, is a coffee shop. At the Formica-top lunch counter are nine stools covered with antique red leather. The tops of the stools are rotating and self-returning. The front of the lunch counter is stainless steel with a rolled-in pattern. Front and upper portions of the back bar and the kitchen partition are also of stainless steel. The step-tread rubber is mahogany color. There is a lighted Plexiglass purse shelf under the counter.

Equipment of the coffee shop includes a coffee urn, ice-cube maker, liquor locker, ice-cream well, refrigerators, sinks, drainboard and locker.

Adjoining the coffee shop, with only a slight separation between them, is a dining room seating 12. This section of the cafe has continuous banquette seats along either side. In front of the seats on one side of the car are two triangular tables, each seating two. Opposite are two square tables placed diagonally with chairs on the aisle side. The seats have cushions of tan leather and quilted backs in the same material. The chairs are upholstered in red leather.

The parlor section at the rear seats 20 persons. At the tapered and rounded observation end is a two-passenger settee upholstered in needlepoint of wine color.

Ahead of the settee are 18 observation chairs placed with their backs towards the sides of the car. Half of the chairs are upholstered in wine needlepoint and the other half in green Velpoint.

Floor covering varies in the different sections of the car. In the kitchen and coffee-shop work section the floor is Monel metal with wooden floor mats. The dining room and coffee shop and the passageway to the parlor section are covered with 6-in. rubber tile in a pattern of green and white and black and white squares outlined with mahogany, white and black strips. In the parlor section is a green carpet.

The color scheme of the parlor section is ivory, tan, wine and green. Ceiling, frieze panels and Venetian blinds are ivory. Pier panels are covered with Realwood Formica Prima Vera, a very light color tropical wood also known as white mahogany. Wainscoting is covered with tan Tolex. The chairs are green and wine.

There are three bas-reliefs in the parlor section. Two of these are on the end bulkheads at the forward end of the car and have as their themes a farming scene and a grain elevator, symbolic of the principal activity of the Red River country. The background of these bas-reliefs is Prima Vera Realwood Formica. A third panel is located on the frieze over the body end door; its subject is flying Canada geese.

Illumination in the parlor section is from fluorescent side-wall trough lights. Face plates of the lights have two horizontal wine color lines as a repeating note for the wine upholstery.

The basic color scheme in the table dining section is ivory, gray, tan, red and green. Ceiling and frieze panels are ivory, and pier panels have concealed vertical fluorescent lights with the light shields covered with tan leather. Table tops are covered with a tan linen Formica.

Three carved-glass mirrors carry a design theme inspired by the country which "The Red River" serves. Two of these are located at the locker end of the section and run from the seat backs to the ceiling. Sugar-beet and potato raising and dairy farming are the themes. The third mirror, on the large wing partition at the coffee-shop end, has wheat harvesting as its theme. All the carvings are colored in gold, silver, green and red and are highly formalized.

All the bas-reliefs in the parlor-lounge cars and dining section of the cafe-coach cars of "The Internationals" and in the cafe-parlor car of "The Red River," as well as the plastic murals in the coaches of the latter, are the work of K. George Kratina, an American sculptor.

The mail-baggage cars of all the trains are equipped with a mail compartment 30 ft. 1 in. in length. The remainder of the car consists of a baggage compartment 51 ft. 6 in. long, having a 5-ft. door opening on each side.

A gravity water supply is installed with two 25-gal. tanks over each toilet, one in the mail room and one in the baggage room. The main portion of the baggage compartment is lined with corrugated aluminum placed vertically, while the remainder of the car, including headlinings, is finished in flat aluminum.

Basically, all the cars are of similar design, built to carry the vertical loads on the side frames which are of girder construction. Likewise, the principal dimensions of all the cars are the same, as shown in the table.

The A. A. R. standard contour for new passenger cars has been used in the cross-sectional overall dimensions. Body framing consists mainly of members made of low-alloy, high-tensile steel. The vertical end members are of open-hearth steel. The underframe, side frames and roof frames are assembled by arc welding in jigs as subassemblies, the side sheets being applied by spot welding and the roof sheets by shielded arc seam welding. The subassemblies are finally joined together by riveting, using streamline head rivets.

On all cars, except the mail-baggage cars, the floor is composed of aluminum chanarch laid crosswise. Over this, lightweight Tucolith is applied to a total thickness of 13/16 in.

In the kitchen of the cafe-coach the floor is covered with Monel metal welded at the joints and a wooden floor rack placed over it. Supporting the floor are pressed Z-stringers of low-alloy high-tensile steel.

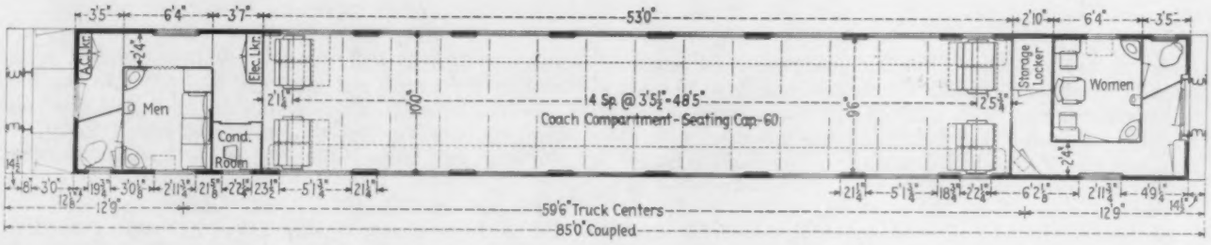
The mail compartment of the mail-baggage car has a single-course tongue-and-groove yellow pine floor applied to wood furring strips bolted to the steel floor stringers. In the baggage compartment there are two courses of yellow pine wood flooring. A galvanized copper-bearing steel floor rack resting in a tray of the same metal is applied in the ends of the baggage compartment. Suitable floor drainage is provided.

Two types of body insulation are used. On all the mail-baggage cars, the cafe-parlor car of "The Red River," and the parlor-lounge cars of the "Internationals" 3-in. Ultralite Fiberglas is installed in the floor, sides, ends and roof. On all of the coaches and the cafe-coaches of "The Internationals" 3 in. of Stonefelt Type A is used. Windows are Adams & Westlake breather type, double glazed with laminated Safety glass inside.

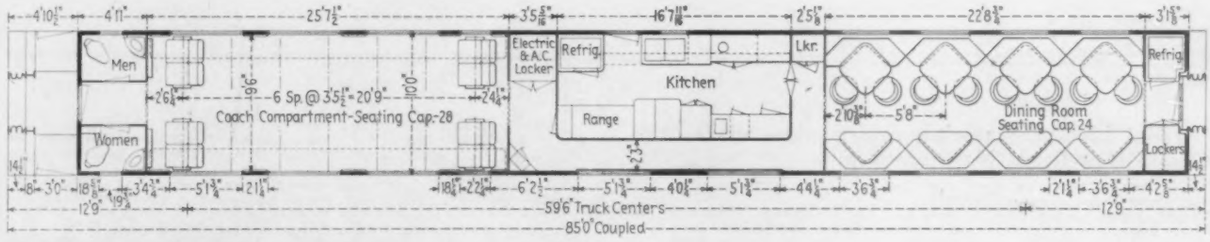
The passenger-carrying cars are equipped with a combination incandescent and fluorescent lighting system. The mail-baggage cars have incandescent circuits only. Exide storage batteries of 1,176 amp. hr. capacity are carried in two battery boxes per car.

The electrical current is supplied by a Safety Gene-

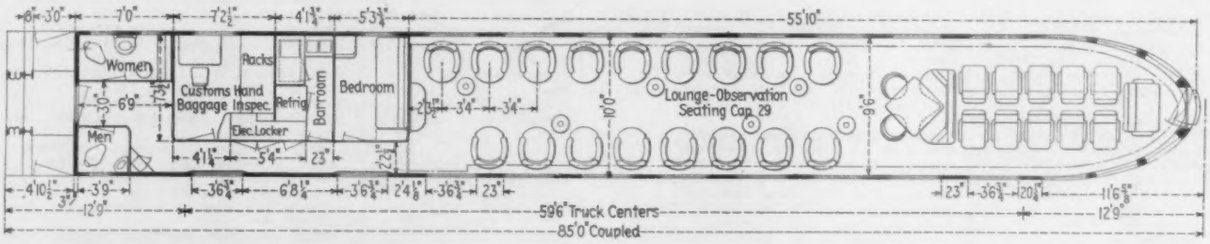
Floor plans of the passenger-carrying cars of "The International" and "The Red River" trains of the Great Northern



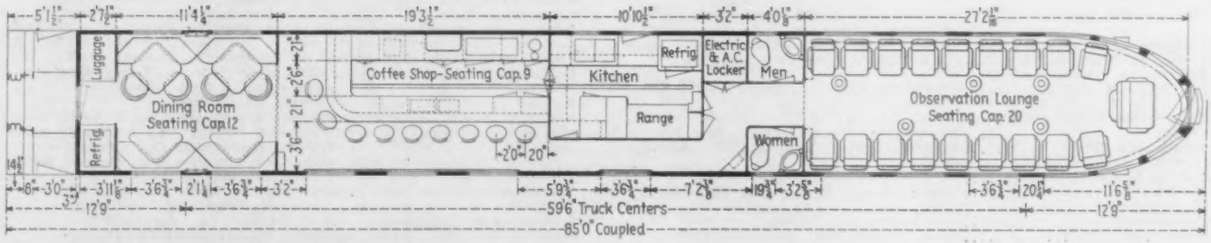
The coaches



The cafe-coaches of "The Internationals"



The parlor-lounge cars of "The Internationals"



The cafe-parlor car of "The Red River"

An "International" parlor-lounge car

motor on all cars except the mail-baggage cars, where an axle generator is used. The Genemotor is a 20-kw., 32-40-volt machine with a 25-hp., 220-volt, three-phase, 60-cycle a.c. motor. The Spicer drive is equipped with a magnetic clutch. The axle generator on the mail-baggage cars is of 5 kw. capacity, 32-40-volt, with Dayton endless V-belt and pulley drive.

Heating is provided in all the passenger-carrying cars by the Vapor zone system with unit fin side-wall radiation, supplemented by an overhead unit built into the air-conditioning system. The mail-baggage cars have the Vapor system as well, thermostatically controlled in the mail compartment and manually controlled in the baggage compartment, with fin side-wall radiation and bulkhead radiators at doors of the mail compartment. An overhead unit heater is applied in the baggage compartment.

All cars of "The Red River," except the cafe-parlor car, are also equipped with a Vapor Simplex auxiliary hot-water heater. The heater system is filled with a solution of 60 per cent Prestone and 40 per cent water by volume.

Partial List of Materials and Equipment for the Three New Great Northern Trains

Aluminum sheets and castings; castings; extrusions	Aluminum Co. of America, Pittsburgh, Pa.
Steel sheets	Armco Steel Corp., Middletown, Ohio
Sheets	American Brass Co., Waterbury, Conn.
Steel sheets	Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
	Jos. T. Ryerson & Son, Chicago
Steel castings	Farrell-Cheek Steel Co., Sandusky, Ohio
Castings	Lebanon Steel Foundry, Lebanon, Pa.
Brass castings	Modern Brass Foundry & Mfg. Co., Columbus, Ohio
Expanded metal	Wheeling Corrugating Co., Wheeling, W.Va.
Monel sheets	Whitehead Metal Products Co., New York
Extruded aluminum	Bohn Aluminum & Brass Corp., Detroit, Mich.
Axles	Standard Forgings Corp., Chicago
Miscellaneous springs	American Spring & Wire Specialty Co., Chicago
Brake equipment; shock absorbing bearings; truck springs	American Steel Foundries, Chicago
Brake equipment	New York Air Brake Co., New York
Brake shoes; wheel-slide control	American Brake Shoe Co., New York
Brake-shoe keys	Pullman-Standard Car Mfg. Co., Chicago
Hand brake	National Brake Co., New York
Journal boxes, roller bearing	Timken Roller Bearing Co., Canton, Ohio
Journal oil	Texas Co., New York
Fabreeka pads	Fabreeka Products Co., Boston, Mass.
Draft gears	Waugh Equipment Co., New York
Upper buffers	Standard Railway Equipment Mfg. Co., Hammond, Ind.
Buffer side-stem springs	Union Spring & Mfg. Co., New Kensington, Pa.
Shock absorbers	Houdaille-Hershey Corp., Houde Engineering Div., Buffalo, N. Y.
Couplers and yokes	National Malleable & Steel Castings Co., Cleveland, Ohio
Steel equalizers	Camden Forge Co., Camden, N. J.
Insulation; brake lining	Johns-Manville, New York
Body center plates; equalizer spring seat	General Steel Castings Corp., Granite City, Ill.
Center-plate liners, manganese steel	Crucible Steel Co. of America, New York
Center-plate liners	Manganese Steel Forge Co., Philadelphia, Pa.
Locking center pins	W. H. Miner, Inc., Chicago
Batteries	Electric Storage Battery Co., Philadelphia, Pa.
Transformers	Sola Electric Co., Chicago
Wire	Republic Steel Corp., Cleveland, Ohio
Cable	Interstate Supply Co., Okonite Co., Passaic, N. J.
Circuit breakers	Heinemann Electric Co., Trenton, N. J.
	Westinghouse Electric Corp., Pittsburgh, Pa.
Solderless wire terminals	Aircraft-Marine Products, Inc., Harrisburg, Pa.
Converters	Jeanette Manufacturing Co., Chicago
Receptacles	Mines Equipment Co., St. Louis, Mo.
	Pyle-National Co., Chicago
Belt and pulley drive	Dayton Rubber Co., Dayton, Ohio
Switches; annunciators; buzzers	Crannel, Nugent & Kranzer, Inc., New York
Switches; marker lights	Pyle-National Co., Chicago
Pilot-light assemblies	E. F. Johnson Co., Waseca, Minn.
Resistors	Ward Leonard Electric Co., Mount Vernon, N. Y.
Razor converter	Cornell-Dubilier Electric Corp., South Plainfield, N. J.
Genemotor; switchboards; light fixtures; switches; candle brackets	Safety Car Heating & Lighting Co., New York
Cove light	Architectural Bronze Studio, St. Louis, Mo.
Anodizing	Stolle Corp., Cincinnati, Ohio
Hydraulic leather	Page Belting Co., Concord, N. H.
Air-conditioning equipment	Frigidaire Div., General Motors Corp., Dayton, Ohio
Anemostats	Anemostat Corp. of America, New York
Registers and dampers	Auer & Register Co., Cleveland Ohio
Registers, grills	Barber Colman Co., Rockford, Ill.
Multi-Vent panels	Pyle-National Co., Chicago
Ceiling fans	Safety Car Heating & Lighting Co., New York
Exhaust fan	Diehl Manufacturing Co., Electrical Div., Singer Manufacturing Co., Somerville, N.J.
Exhaust ventilator	Garland Ventilator Co., Chicago
Dorex panels	Tuco Products Corp., New York
Heating equipment; smoke jacks	Vapor Heating Corp., Chicago
Heater-pipe grills	Diamond Mfg. Co., Wyoming, Pa.
Stainless-steel floor plates	Republic Steel Corp., Cleveland, Ohio
Safety step boxes	Morton Manufacturing Co., Chicago
Platform step treads	American Abrasive Metals Co., Irvington, N. J.
Trap door and folding steps	O. M. Edwards Co., Syracuse, N. Y.
Insulation	Gustin-Bacon Mfg. Co., Kansas City, Mo.
	Johns-Manville, New York
Dednox	Dednox, Inc., Chicago
Felt	Presstite Engineering Co., St. Louis, Mo.
Weatherstrip	Bridgeport Fabrics, Inc., Bridgeport, Conn.
	Harnley Weatherstrip Co., Chicago
	Inland Manufacturing Div., General Motors Corp., Dayton, Ohio
Weatherstrip; rubber pads	United States Rubber Co., New York
Diaphragm vestibule curtains	Morton Manufacturing Co., Chicago
Rubberized cord diaphragm	B. F. Goodrich Co., Akron, Ohio
Flooring material	Morton Manufacturing Co., Chicago
Tucolith	Tuco Products Corp., New York
Rubber floor sheeting	Beck & Blatchford Co., Chicago

The passenger-carrying cars have air-conditioning apparatus of the Frigidaire electro-mechanical type with an eight-ton unit and Trane evaporative condensers, the latter being located under the car. The conditioned air is forced through aluminum ducts and fed through Anemostats and Pyle-National Multi-Vent air-distributing panels where desired. The Frigidaire evaporator unit is located above the ceiling. The mail-baggage cars are not air conditioned, but suitable cooling fans are installed in the mail compartment.

Brake Equipment

New York Air Brake Company air-brake equipment, Schedule HSC with D-22 BR control valve, electro-pneumatic straight-air and speed-governor control is furnished on all cars. The reservoirs are of lightweight steel and the brake pipe is hard copper tubing with sweated fittings. Extra-heavy steel pipe nipples are at the ends of the train line. The brake company's sanding equipment is installed for emergency stopping only.

All cars are equipped with National Malleable & Steel Castings Type H tight-lock couplers and radially connected coupler yokes, with Waugh twin-cushion draft gears. The rear ends of the parlor-lounge cars of "The Internationals" and the cafe-parlor car of "The Red River" are equipped with Type E couplers.

Buffers of the built-up type having adjustable stayrod suspension supports outside of the diaphragms are applied to blind and vestibule ends. The suspension supports and side stems are cushioned with sound-deadening material. The foot plates are of the fixed type made of steel covered with rubber. The upper buffers are of the Fowler type. The diaphragms are of the Morton three-fold type with sloping top section. All canvas is impregnated with a water-repellent and fireproof material.

Openings between the ends of the cars have the builder's standard closures consisting of low-alloy, high-tensile-steel face plates. The outer diaphragms are rubberized fabric.

The rotary type coupler operating apparatus is operated from both sides of the car.

Each car is carried on two Commonwealth four-wheel, swing-motion trucks with single drop equalizers. The wheel base is 8 ft. 6 in. and the wheels 36 in. in diameter, with semi-cylindrical treads. The equipment includes cushion type bolster anchors, one on each side, and two Houde vertical shock absorbers.

Both the equalizer springs and the bolster springs are of the double helical type of silicon manganese steel. The journal bearings are Timken with stench-bomb hot-box alarms. The nominal size is 5½ in. by 10 in., except on the mail-baggage cars which have 6-in. by 11-in. journals. The truck center plate is a separate steel casting bolted to the bolster and insulated with a ⅛-in. pad of linoleum. Further vibration isolation is effected by Fabreeka pads.

Simplex unit-cylinder clasp brakes with a braking ratio of 250 per cent of the light weight of the car at 100 lb. cylinder pressure are mounted on the trucks. The wheel-slide control equipment is of two types, apportioned among the different kinds of cars. On some trucks the American Brake Shoe controller has been applied, and on others the New York Air Brake Company's AP decelostat.

Seal rubbers	Cincinnati Rubber Mfg. Co., Cincinnati, Ohio
Rubber channel	Manhattan Rubber Mfg. Div. of Raybestos-Manhattan, Inc., Passaic, N. J. Mechanical Rubber Products Co., Warwick, N. Y.
Sheet rubber	Home Rubber Co., Trenton, N. J. Plant Rubber & Asbestos Works, San Francisco, Calif.
Sash	Adams & Westlake Co., Elkhart, Ind.
Plate glass	Hadley-Dean Glass Co., St. Louis, Mo.
Window capping	J. Zicherman & Son, New York
Window guards	Ellcon Co., New York
Window blinds	Ajax-Consolidated Co., Chicago
Wire cloth; steel wire netting; wire screen, brass	Ludlow-Saylor Wire Co., St. Louis, Mo.
Door closers	L.C.N. Closers, Inc., Chicago
Hardware	Homer D. Bronson Co., Beacon Falls, Conn. Dayton Manufacturing Co., Dayton, Ohio Jas. L. Howard & Co., Hartford, Conn. Loeffelholz Co., Milwaukee, Wis. Moynahan Bronze Co., Detroit, Mich. National Lock Co., Rockford, Ill. Stanley Works, New Britain, Conn. Yale & Towne Manufacturing Co., Stamford, Conn.
Hangers	Midland Co., South Milwaukee, Wis.
Fasteners	Shakeproof, Inc., Div. of Illinois Tool Works, Chicago Simmons Fastener Corp., Albany, N. Y. South Chester Corp., Chester, Pa.
Fastener assemblies	United-Carr Fastener Corp., Cambridge, Mass.
Plymetl	Haskelite Manufacturing Corp., Grand Rapids, Mich.
Myrtle wood	Gaines Hardwood Lumber Co., St. Louis, Mo.
Formica	Formica Co., Cincinnati, Ohio
Seats, footrests, chairs	Heywood-Wakefield Co., Gardner, Mass.
Seats	Beck & Blatchford Co., Chicago S. Karpen & Bros., Chicago
Settees—men's lounges	Art Rattan Works, St. Louis, Mo. S. Karpen & Bros., Chicago
Stools	Chicago Hardware Foundry Co., Chicago
Chairs, tables	General Fireproofing Co., Youngstown, Ohio
Upholstery	Goodall Fabrics, Inc., New York
Leather	Textileather Corp., Toledo, Ohio Waterhouse Co., Webster, Mass.
Curtains	Adams & Westlake Co., Elkhart, Ind. Morton Manufacturing Co., Chicago
Headrest covers	Art Textile Corp., Highland, Ill.
Carpet	Nathaniel E. Dewall, Chicago
Carpet, carpet binding, mattresses	Beck & Blatchford Co., Chicago
Carpet cushions	Republic Rubber Div., Lee Rubber & Tire Corp., Youngstown, Ohio
Rubber bumpers	Home Rubber Co., Trenton, N. J.
Mirrors	Harriton Carved Glass Co., New York Waterhouse Co., Webster Mass.
Mirror frame	Hunter Sash Co., Flushing, N. Y.
Plexiglas shelves	Pearson-Berlinghof, Langhorne, Pa.
Bronze castings	East Birmingham Bronze Foundry, Birmingham, Ala. Lloyd & Scott Brass Foundry, Wilmington, Del. Modern Brass Foundry & Mfg. Co., Columbus, Ohio
Folding sofa berths	Moynahan Bronze Co., Detroit, Mich.
Vanity tables	Watson Manufacturing Co., Jamestown, N. Y.
Refrigerator and kitchen equipment	Universal Manufacturing Co., St. Louis, Mo.
Range, broiler and steam tables	Stearnes Co., Chicago
Dishwashing machines	American Production Co., San Francisco, Cal.
Smoking stands	Marshall Field & Co., Chicago
Ceramic tile	Eckhart & Ziske Terrazzo & Tile Co., St. Louis, Mo.
Drinking water coolers	Henry Giesel Co., Chicago E. A. Lundy Co., New York
Water tanks	American Car & Foundry Co., New York
Cup dispensers	Dixie Cup Co., Easton, Pa.
Lavatories	Adams & Westlake Co., Chicago Crane Co., Chicago
Hoppers	Duner Co., Chicago
Lavatory and toilet room dispensers	Scott Paper Co., Chester, Pa. West Disinfecting Co., Long Island City, N. Y.
Seamless steel tubing	C. A. Roberts Co., Chicago
Fittings	Mueller Brass Co., Port Huron, Mich.
Pipe, tubing	Johns-Manville, New York
Card holders	Apex Railway Products Co., Chicago
Seat numbers and ticket holders	General Etching & Mfg. Co., Chicago
Car signs	General Outdoor Advertising Co., Chicago Hunter Illuminated Car Sign Co., Flushing, N. Y.
First-aid kit	Bauer & Black Div., Kendall Co., Chicago
Litters	Gold Metal Folding Furniture Co., Racine, Wis.
Extinguishers	Pyrene Manufacturing Co., Newark, N. J.
Fuel supply cabinets	Waukesha Motor Co., Waukesha, Wis.
Paint	E. I. du Pont de Nemours & Co., Wilmington, Del. Ohmlac Paint & Refining Co., Chicago Pittsburgh Plate Glass Co., Pittsburgh, Pa. Standard Varnish Works, Port Richmond, N. Y.
Iron primer	Sherwin-Williams Co., Cleveland, Ohio
Flame-proof paint	Patterson-Sargent Co., Cleveland, Ohio
Alumilastic	Parr Paint & Color Co., Cleveland, Ohio
Scotchlite	Minnesota Mining & Manufacturing Co., St. Paul, Minn.

Pennsylvania's First

2500-hp

Diesel-Electric Locomotive

This is the first of eleven 2500-hp road-transfer locomotives built by Lima-Hamilton for the Pennsylvania Railroad.

Total length — 79′ 0″
Total weight in working order — 180 tons
Two engines — 1250 bhp each
Traction motors — six
Maximum speed — 65 mph
Continuous T.E. — 64,000 lb

This locomotive is powered by Lima-Hamilton diesel engines. The engines and engine parts and a majority of the electrical equipment are interchangeable with standard Lima-Hamilton diesel-electric locomotives.

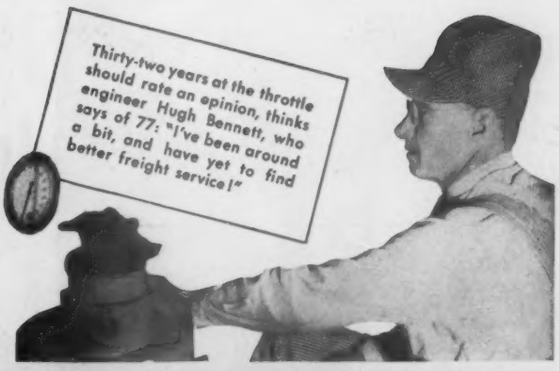
LIMA HAMILTON CORPORATION

LIMA LOCOMOTIVE WORKS, INC.

A division of the Lima-Hamilton Corporation

LIMA, OHIO

The Spirit of 77

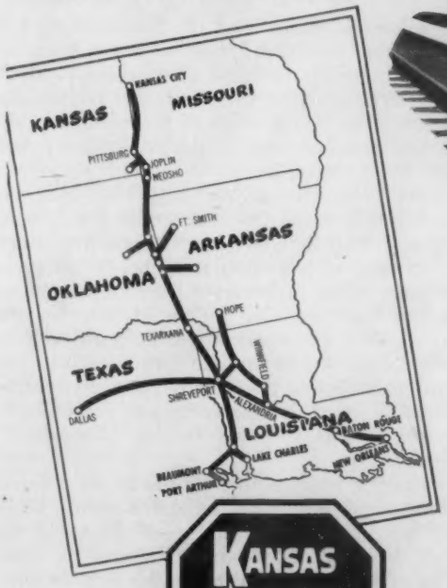

Thirty-two years at the throttle should rate an opinion, thinks engineer Hugh Bennett, who says of 77: "I've been around a bit, and have yet to find better freight service!"

Conductor Los Allen's 39 years with the line demonstrate how he feels about the KCS. "I've worked on a lot of trains," Los says, "but I get my biggest boot out of having a part in maintaining 77's near-perfect on-time record."

Fireman Harvey Ritzky checks 77 "right on the nose." A KCS worker and booster eight years, his main objective is the engineer's seat opposite—on 77, of course.

Brakeman Ken Hinche—another young railroader (8 years with KCS)—puts it this way: "Everybody likes a winner, and 77 is all of that!"

In his eight brief years of railroading, brakeman George Norwood has found the KCS to be "my kind of company," and the service of 77 "absolutely tops."



SEVENTY-SEVEN IS A NATURAL for southbound freight wanted in the up-and-coming country between Kansas City and the Gulf.

Out of the "Heart of America" at 9:45 nightly, regular shippers know that KCS 77 spells RUSH! Train and engine crews know it too, and take pride in rolling the double-seven over their respective districts "on the money."

Here's a railroad-railroader combination that will click for you!

J. W. SCOTT
Vice-President—Traffic
Kansas City, Missouri

KANSAS CITY SOUTHERN Lines

The total of abstracts received, and the listing of bills thereon is verified immediately upon receipt by comptometer operation. The comptroller's copies of bills receivable are microfilmed, reducing filing space by about 98 per cent

Draft Settlement of Inter-Road Bills Produces Savings for N. Y. C.

By G. H. ALBACH
Comptroller
New York Central System

For many years now the railroads have used the draft as a means of making many financial settlements, yet its full potentialities have not been realized. The chance for the greatest savings through the use of the draft are in the field of joint facility and miscellaneous bills, yet it is here that the draft settlement is used least. On the New York Central we have been experimenting with the draft settlement of miscellaneous bills for about three years, and thus far, with only about 25 per cent of our railroad bills included in this plan, we estimate a saving of approximately $10,000 annually. Emboldened by this success, we are outlining the plan in the belief that it will serve others as well as it has served us.

In handling accounts receivable, bills are prepared in the ordinary way, with the usual number of copies, although we have found it of some advantage to place bills subject to draft in a separate number series. (Reference to the distinctive number in a counter-bill automatically identifies the original bill as paid. Thus the ledger does not have to be checked to verify payment before the counter-bill is approved.) Each original bill is impressed with a stamp of distinctive design to indicate the manner of settlement, and to prevent its being vouchered for payment by the debtor road. Periodically—once each month or oftener, as the volume of billing dictates—bills are released to each debtor, accompanied by an "abstract of bills receivable" (Fig. 1). The abstract shows the date of rendition and month of audit, while bills are listed by number and amount only. No description is necessary since this information is available from the accompanying bills.

The abstracts are prepared and mailed out by the disbursement accounting officers by whom the bills are made and a copy of the abstract and a copy of each bill is released to the comptroller, in whose office the accounts receivable ledgers are maintained. The bill copies are microfilmed, checked against the contract records, and destroyed. The abstract copies are accumulated until the close of the audit month, when the comptroller prepares a summary abstract for each road, listing the numbers and amounts of abstracts released. (Any additional bills prepared in other offices which do not have sufficient billing volume to warrant the direct issuance of abstracts are added.)

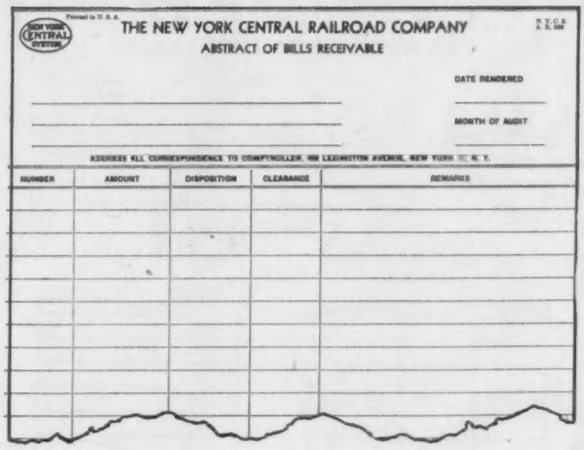
The total of all summary abstracts must agree with the total of billing reported by each bill-originating office. Then the total of each road's summary abstract is posted to that road's account in the accounts receivable ledger. On the last business day of the month, drafts are deposited for the amounts of the summary abstracts, only the amount of the draft being posted as a credit in the ledger. *Note, therefore, that individual bills and payments are not posted to the accounts receivable ledger, but only the total monthly billing and total monthly payment as one amount.*

Not only has the posting of the ledger been reduced to single monthly debits and credits, but all tracing for unpaid accounts has been eliminated. Because there is no tracing, exceptions no longer need be addressed to the office where the ledger accounts are maintained, but instead may be addressed directly to the office which originated the bill and therefore must investigate the exceptions.

When the ledger is maintained on the basis of bill copies, or of punched cards, the economies are, perhaps, less spectacular (there are no hand or machine postings of credits to be eliminated by the plan), but savings are nevertheless demonstrable. A copy of the summary abstract, or a single punched card for the total thereof, will suffice for the ledger record.

As we receive abstracts and accompanying bills for bills payable to other roads the comptroller verifies the correct listing and total by comptometer operation. Each bill is then impressed with a circular stamp, which gives absolute assurance to our disbursement accounting offices that the bill has been recorded by the comptroller for draft settlement. Also, our audit month may differ from the settlement month shown by the issuing road. The bills are then distributed to the disbursement accounting officers responsible for their clearance, and the office to which each bill is sent is noted in the "disposition" column of the abstract.

Some roads prefer to close their abstracts on a calendar-month basis, and others on an audit-month basis. Therefore we have two closing dates—the 31st and the 15th, and two payment dates—the 15th and the 31st. Drafts may be drawn fifteen days after the final or summary abstract has been issued. Shortly before each of the two settlement dates, a form letter (Fig. 2) is sent to the treasurer authorizing him to accept drafts as presented. A copy of this letter constitutes our accounts payable ledger. (The date each draft is paid is stamped opposite the amount.)



THE NEW YORK CENTRAL RAILROAD COMPANY

ABSTRACT OF BILLS RECEIVABLE

DATE RENDERED

MONTH OF AUDIT

ADDRESS ALL CORRESPONDENCE TO COMPTROLLER, 466 LEXINGTON AVENUE, NEW YORK 17, N. Y.

NUMBER	AMOUNT	DISPOSITION	CLEARANCE	REMARKS

Fig. 1

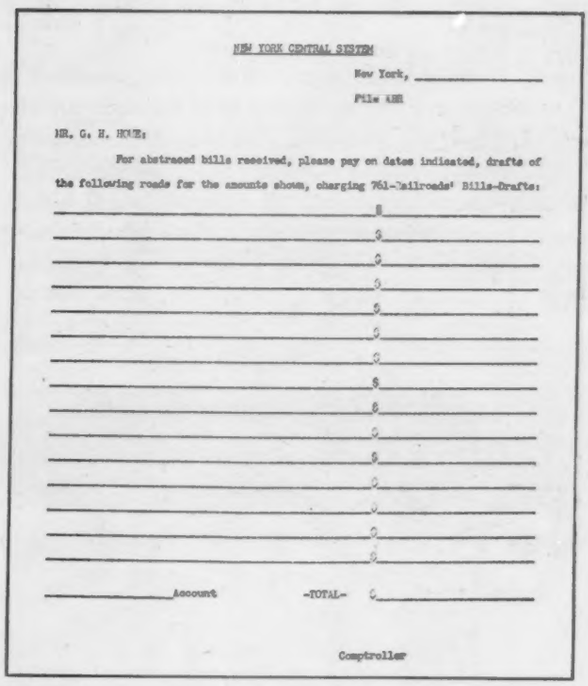
Once each month, the total of abstracts received from other roads during the past thirty days (together with the total of abstracts issued for others, as hereinafter described) is the subject of a journal entry, debiting account 766 and crediting account 761, to which latter account drafts are charged as paid.

A few words might be interpolated at this point, as to the charging of bills awaiting clearance to account 766 rather than to account 727. Most of these bills, or at least the larger bills, have been anticipated by accruals, and therefore the accrual account (766) should be charged when the liability is set up in account 761. It is, of course, impossible at that time to match the debit to account 766 against the original accrual. Therefore these debits are carried in a separate subdivision, but for all informative purposes the net only of the two accrual subdivisions is reported. This procedure has been reviewed and accepted by I.C.C. examiners and by outside accountants.

As abstracted bills are received by the disbursement accounting officers, they are immediately dispatched to the field for the usual approvals. As verified bills are received back with approvals, they are listed for clearance on our form AD-35 (Fig. 3). Although similar in intent to the audit copy of a voucher, here again considerable accounting economies are effected. The name only of the creditor is shown and may be abbreviated, whereas on a voucher, the name of the payee must be written out in full and accurately, and the address added. Only the month for which bills are abstracted, the bill number, and the month need be shown in this form. Bills from several roads may be, and are, listed on the same clearance sheet, and the accumulation of distributions may reduce the number of tabulating cards to be punched and handled. The many signatures required on numerous vouchers are eliminated, and the treasurer's work on vouchers is eliminated entirely.

The original of each form AD-35, properly certified as correct and approved, is retained in the disbursement accounting office the same as are audit copies of vouchers, and a copy of each form AD-35 is transmitted to the comptroller. The audit number is stamped with a numbering machine in the "clearance" column of the foreign road's abstract opposite each bill as cleared. At the end of the month, an adding machine tape listing the amounts against which no audit number appears in the "clearance" column verifies the balance in the debit subdivision of account 766.

It should be plain that we have eliminated vouchers



NEW YORK CENTRAL SYSTEM

New York, _____

File 488

MR. G. H. HOWE:

For abstracted bills received, please pay on dates indicated, drafts of the following roads for the amounts shown, charging 761-Railroads' Bills-Drafts:

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

_____ $_____

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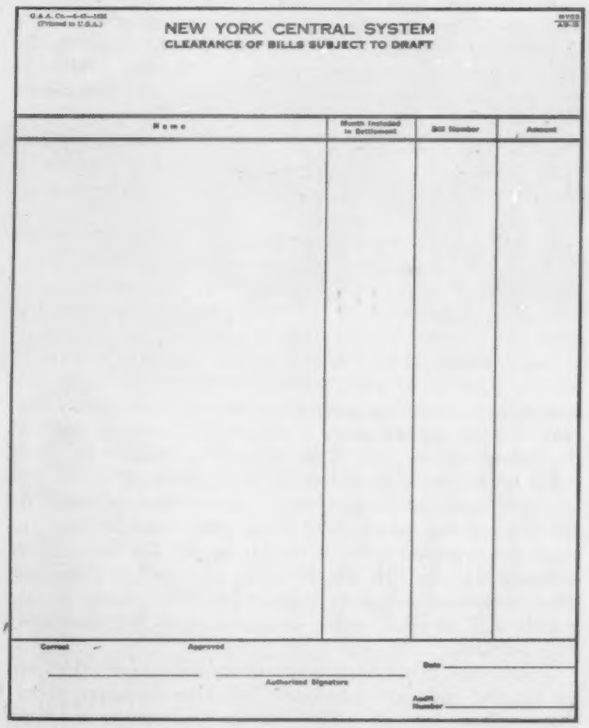
_____ $_____

_____ $_____

_____ Account -TOTAL- $_____

Comptroller

Fig. 2



NEW YORK CENTRAL SYSTEM

CLEARANCE OF BILLS SUBJECT TO DRAFT

Name	Month Included in Settlement	Bill Number	Amount

Correct _____ Approved _____

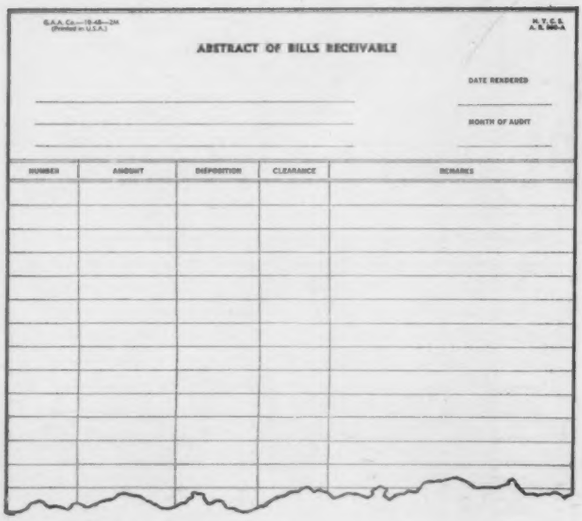
Authorized Signature

Date _____

Audit Number _____

Fig. 3

entirely so far as the treasurer is concerned. Also, we have reduced greatly the voucher work in the disbursement accounting offices, and foreign road tracers are a thing of the past. Form AD-35 is, in effect, the detail of a journal entry debiting various expense and income ac-



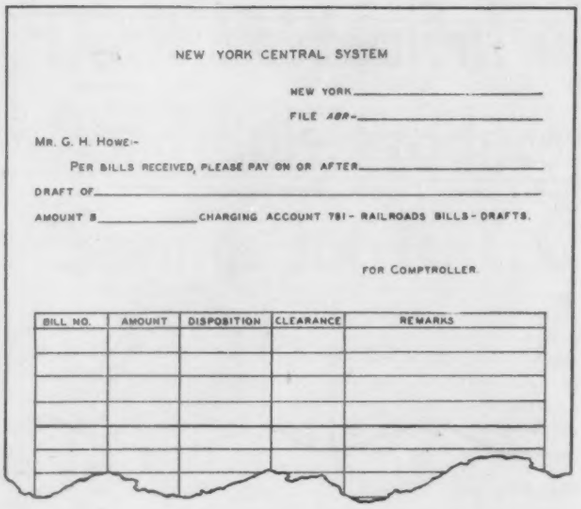
ABSTRACT OF BILLS RECEIVABLE

DATE RENDERED

MONTH OF AUDIT

NUMBER	AMOUNT	DISPOSITION	CLEARANCE	REMARKS

Fig. 4



NEW YORK CENTRAL SYSTEM

NEW YORK _____

FILE *ABR*-_____

Mr. G. H. Howe:-

Per bills received, please pay on or after _____

draft of _____

amount $ _____ charging account 781 - railroads bills - drafts.

for Comptroller

BILL NO.	AMOUNT	DISPOSITION	CLEARANCE	REMARKS

Fig. 5

counts, and crediting the debit subdivision of account 766. As each bill is listed thereon, any previous accrual is concurrently reversed.

There are occasions when single large bills are subject to separate draft immediately upon rendition. Some connecting terminal roads may, by agreement, draw for their monthly accumulation of bills, but may not wish to incur the expense of printing and preparing abstracts. We are prepared, therefore, where the monthly volume is sufficient, to furnish to the roads blank abstract forms (Fig. 4). Otherwise upon receipt of one or a few bills, we prepare in triplicate a combined draft authority and abstract (Fig. 5). The original is the treasurer's authority for the acceptance of the creditor's draft, only the upper portion being filled in, above the signature. The first copy serves as the accounts payable ledger. On the second copy, the bill numbers and amounts are listed and the disposition shown. Otherwise this copy is handled in the same manner and serves the same purpose—as abstracts rendered directly by the creditor road.

Gross, rather than net, settlement—each road drawing for the total of its own monthly summary abstract—are essential to the fullest realization of economies under this plan. Under the net plan, it cannot be foreseen whether the balance at the end of the accounting period will be a debit or a credit, and thus all bills, both rendered and received, must be accumulated in a suspense account. At the close of the month, therefore, entry must be made to clear the suspense account, and to set up net balances in accounts 715 or 761, whichever is appropriate. Also, another suspense account, whether a subdivision of accounts 727 or 766, must be maintained for uncleared bills payable.

Under the gross settlement plan, bills receivable are set up and run out in account 715. One inclusive procedure suffices for all bills, whether subject to monthly draft or to payment by individual voucher, except that the ledger details of the draft accounts are materially reduced.

The gross settlement plan is the only equitable plan where one road prefers an audit-month basis, and the other road, a calendar-month basis. A net settlement gives one road a fifteen-day advantage over the other in the matter of receiving payment. However, by keeping accounts receivable and payable separate, any group of bills rendered within a thirty-day period is subject to draft fifteen days after the end of that period. Thus the gross settlement plan necessitates a few extra drafts but they are inconsequential when stacked against the simplified accounting and other advantages of the plan. As a matter of fact, these advantages are recognized by accounting officers generally, e.g., the gross settlements provided in Railway Accounting Rules for comparable freight claim and car repair accounts.

The objection that bills are paid before their correctness has been proven is in complete disregard of the principle in practice between railroads in respect to all other accounts, namely, that accounts shall be accepted as rendered, and adjustments made in a subsequent month.

Joint facility bills are, as a matter of fact, seldom corrected except for major errors. The customary procedure is to include the necessary adjustment in the next bill. Errors in non-recurring bills are adjusted by counter-billing authority. In the adoption of the plan, participating roads generally agree that test and retroactive bills shall be excluded from abstracts unless specifically authorized.

It has been argued that payment of a bill before approval may lead to laxity in its subsequent examination. Are traffic and car service accounts, which are paid immediately upon rendition, examined less carefully for that reason? The exercise of due care in the examination of accounts payable, whether paid before or after such examination, is a matter of internal control and supervision. Furthermore, since there is no pressure for payment by the creditor, it seems actually that, under the draft settlement plan, more time may be taken to give paid bills a most complete and unhurried examination.

Ample provision is made with respect to bills which the debtor would not have paid had examination preceded payment. Exceptions must be acknowledged within thirty days. If not so acknowledged, or if a controversy develops, the amount in dispute is subject to recharge, together with like charges in subsequent bills. The billing road is obliged to accept such recharges, and to exclude such charges from future abstracts until the controversy has been settled. Clerical errors in abstracts are subject to correction before settlement, or thereafter shall be adjusted by the erring road in the next available abstract.

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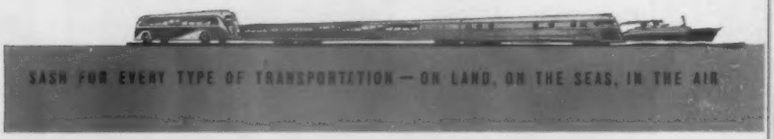

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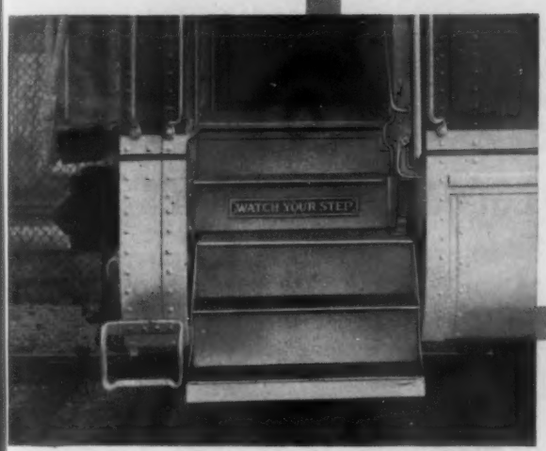

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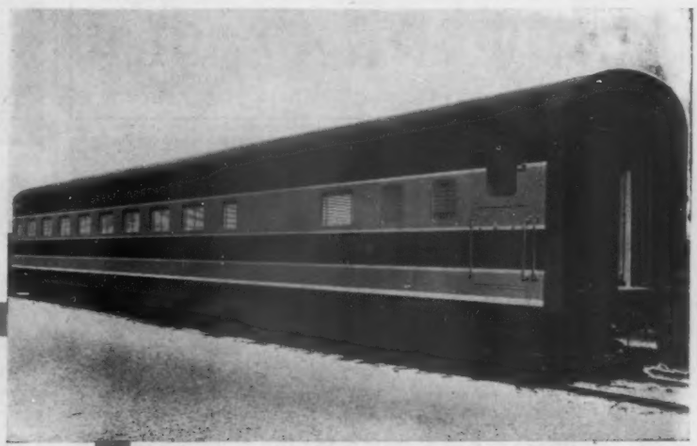

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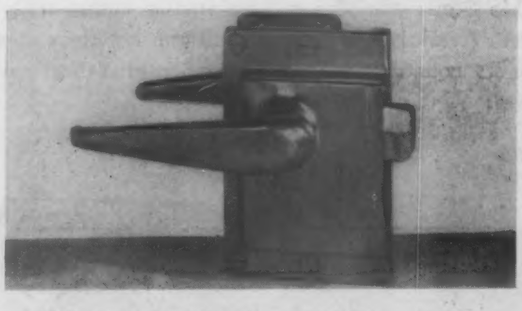

Vestibule Side Door Wedge Bolt

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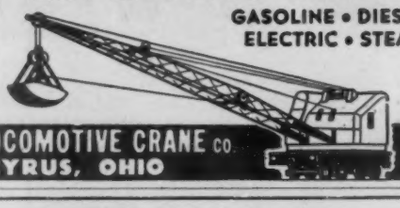

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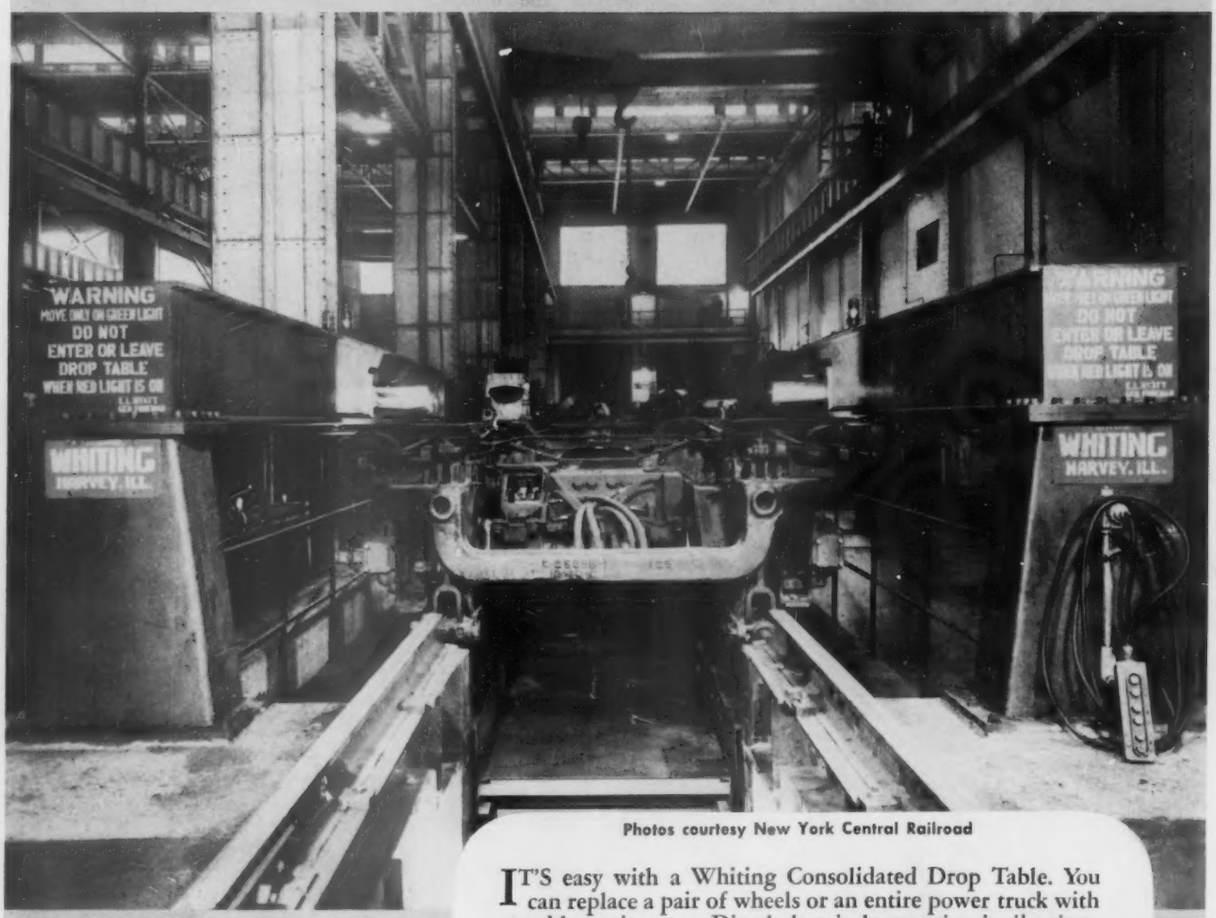
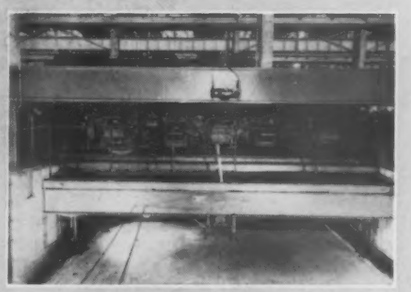


Photos courtesy New York Central Railroad



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GENERAL NEWS

Union Rivalry Impairs Rail Labor Relations

Has been biggest factor in "deterioration," Loomis says

The "strong increase in union rivalry" has been the "biggest single factor" in the "deterioration" of labor-management relations on the railroads, according to Daniel P. Loomis, chairman of the Western Carriers' Conference committee, which, with like committees from other regions, is representing railroad management in current wage proceedings. Mr. Loomis, who is also chairman of the Association of Western Railways, expressed this view in response to a question at a press conference he held June 28 at Washington, D. C.

The question was followed by another which asked if an "industrial union" were the answer. Mr. Loomis' reply was that management's feelings about that were "mixed," but he thought most railroads would prefer the present set-up, "with all its grief."

He also discussed the strike of the Switchmen's Union of North America against five western roads. As to its bearing on the "present international situation," he pointed out that one of the affected roads, the Great Northern, carries about one-third of the iron ore from the Missabe area to the upper Great Lakes ports; and that another, the Chicago, Rock Island & Pacific, is among roads now confronted with the peak grain movement. Also, Mr. Loomis said, there are "war plants" on all five roads, the other three being the Chicago Great Western, Denver & Rio Grande Western and Western Pacific.

Backlog of Cases

Asked about the backlog of cases before the National Railroad Adjustment Board's First division, Mr. Loomis said they could be cleaned up if the labor organizations would agree to procedures for local handling by system boards on the roads involved. It was his understanding that some unions might favor such procedures but others, seeking precedents of nationwide application, would not.

Another questioner asked Mr. Loomis about statements made recently before Congressional committees by railroad labor leaders who complained that top railroad officers do not now participate in wage negotiations which are left to lawyers; and that management's policy in national wage cases is to let them go to emergency boards so that a better record can be built in support of offsetting rate-increase proposals. The labor leaders making statements along those lines were, respectively, D. B. Robertson, president of the Brotherhood of Locomotive Firemen & Enginemen, and George M. Harrison, president of the Brotherhood of Railway Clerks.

As to Mr. Robertson's complaint, Mr. Loomis conceded that operating officers formerly participated to a greater extent than they now do in wage-negotiation conferences. He explained, however, that such officers can no longer be relieved of their regular duties for the required periods of time, because wage negotiations have become more or less continuous proceedings. Thus the carriers have had to set up specialized personnel departments to handle them. As to Mr. Harrison's charge that management wants every case to go to an emergency board, Mr. Loomis denied it. He cited national settlements of recent years with telegraphers, maintenance of way employees, conductors, trainmen, and firemen.

Carriers Have Accepted Reports

Asked to indicate the score on acceptance of emergency-board reports, Mr. Loomis said that the carriers had accepted all such reports in national cases, although a few reports affecting individual roads have been rejected by the managements of such roads. The operating employees, he said, have rejected all emergency board reports of the past 10 years or so, but the non-operating employees have acepted a couple—a 1943 report, and that which gave them the 40-hr. week last year.

As to what should be done by the government about the present cases involving the strike of the Switchmen's Union and the pending demands of the Brotherhood of Railroad Trainmen and Order of Railway Conductors, Mr. Loomis suggested that he would like to see the government "support the report of their emergency board." He was also asked about the pending Donnell bill to outlaw railroad strikes, on which he was scheduled to testify on June 29 before the Senate committee on labor and public welfare. The questioner wanted to know if the bill didn't propose a "cure worse than the disease."

Mr. Loomis did not think so. He said there has been "compulsory arbitration" of the "hit or miss" variety in the railroad industry for some time. He referred to the 1943 settlement of which the late President Roosevelt was the arbiter; the settlement of the 1946 strike on the basis of proposals made by President Truman; and government seizure of the railroads in 1948. He is supporting the Donnell bill "with reluctance," Mr. Loomis emphasized. When asked if it would lead to government ownership, he replied that government ownership was more likely to result from the present "chaotic situation."

Another questioner referred to the recent announcement by the Railway Labor Executives' Association that it was suspending cooperation with railroad management on matters of mutual interest. Mr. Loomis said that so far as he was able to see, the R.L.E.A. unions have not "completely" ceased to cooperate. He added that the announcement was a reflection of the union leaders' "pique" over management's support of the Donnell bill and its opposition to another pending bill which would authorize the "union shop" and "check-off" of union dues in the railroad industry.

"That's a $64 question" was Mr. Loomis' reply to an inquiry as to whether a rate increase would be sought if the railroads were to grant all demands involved in the cases on which the emergency board reported. He added that most railroad officers feel that rate increases may have reached the "saturation point" in view of the present competitive situation.

MacDonald Condemns Overloading of Trucks

Commissioner tells Senate group many 1949 loads were illegal

Approximately one-fourth of 1949 ton-miles on main rural roads were produced by trucks exceeding state legal load limits, according to figures presented this week to the Senate's subcommittee on domestic land and water transportation by Thomas H. MacDonald, commissioner of the Bureau of Public Roads, U. S. Department of Commerce. Mr. MacDonald also reiterated his previously expressed views that an axle-load limit of 18,000 lb. for trucks is required to prevent destruction of the highways.

He made his presentation at the June 27 and 29 sessions of public hearings which the subcommittee, a unit of the Senate committee on interstate and foreign commerce, is holding in connection with studies it is making pursuant to Senate Resolution 50. The subcommittee is headed by Senator Myers, Democrat of Pennsylvania. It also received this week a statement submitted for its record by the Na-

THE HIGHEST HONOR given for industrial safety—the Distinguished Service to Safety Award—was presented recently to the Pullman-Standard Car Manufacturing Company by Ned Dearborn, president of the National Safety Council. Citing the company's injury frequency rate for 1949, which was a little more than half the industrial group average, Mr. Dearborn pointed out that Pullman-Standard was the only company wholly or largely within the railway equipment field ever to receive the award. The award was based on the company's ability to maintain injury and severity rates substantially below the recent averages for similar organizations and to show a marked improvement in comparison with the previous year's rates. Pullman-Standard's wartime safety record in 1944 had previously earned for it the same award. Pictured at the Chicago presentation ceremonies, from left to right, are Paul J. Brand, director of safety, Pullman-Standard; Champ Carry, president, Pullman, Incorporated, and Pullman-Standard; Mr. Dearborn, and J. H. Bradley, safety engineer, Pullman-Standard

tional Industrial Traffic League. The league said, among other things, that it is becoming "increasingly concerned about the straitened financial condition of the railroads," because that situation "poses a threat of government ownership."

Commissioner MacDonald's presentation was a comprehensive one. Its seven parts occupied 172 mimeographed sheets, and included many charts and tables. In Parts I and II the commissioner discussed the growth of motor vehicle registration and use, and the effects of size and weight of vehicles on the geometric design and traffic capacity of highways. Among recent trends noted in the former discussion was "a constant increase in the size and the payload and gross weight of the combination vehicles"; and "a marked tendency in the loading of commercial vehicles, and particularly the combination vehicles, to overleap the limits of vehicular weights established by state laws, and more alarmingly, to overload existing highways."

Among conclusions of studies outlined by the commissioner in his discussion of the effects of size and weight of vehicles on the traffic capacity of highways was one holding that in level terrain one truck is equivalent, in a capacity sense, to two passenger cars on a multi-lane highway and 2½ passenger cars on a two-lane highway. In rolling terrain, the studies found, one truck on a multi-lane highway is equivalent to four passenger cars, and on a two-lane highway to five passenger cars.

Taking up in Part III of his presentation the effect of axle loading on roads, Mr. MacDonald asserted at the outset that "all roads, of whatever design, are limited in their axle-load supporting capacity," and "the effect of excessive axle loading is to shorten the life of the road." He added that axle loading in excess of 18,000 lb. will shorten the useful life of "most of the surfaced roads of the United States." Noting that the American Association of State Highway Officials has recommended an 18,000-lb. limit, Mr. MacDonald went on to say that his bureau "subscribes to that recommendation."

He then proceeded with an undertaking to show that the recommended limit was not "arbitrarily selected," but was based upon mathematical theories of highway design which had been confirmed by tests "carefully conducted." Of the 22,400-lb. limit, now allowed in 7 states, Mr. MacDonald said it is one for which "there is no experimental basis whatever."

Increasing Damage Observed

"Observations of damage unquestionably attributable to excessive axle loading (he also said) have been reported with increasing regularity by highway authorities all over the country. Circumstantial proof of the cause is found in the fact that the damage is occurring where heavy weights are known to be present and is not occurring on roads of lighter traffic; it is occurring on the outer lanes of four-lane pavements where trucks move in greatest numbers and not in the inner lanes where automobiles pass trucks; in many instances it is observed to occur on the sides of roads known to be traveled by heavily loaded outbound vehicles and found to be absent on the other sides used by the same vehicles returning light."

The commissioner next recalled that he had said in 1931 that the roads then being built would stand 18,000-lb. axle loads on pneumatic tires, and that "roads are more destroyed really by climatic and soil conditions than they are by any use that is made of them by the public." Today, Mr. MacDonald continued, he can still say that the country's main roads are generally capable of withstanding 18,000-lb. axle loads. "But," he added, "I cannot today exclude traffic loads as a cause of road damage. The reason lies in the great increase that has occurred in the number of vehicles with axle loads above, and far above, the design load of 18,000 lb."

In Part IV of his presentation, Mr. MacDonald discussed the weight of vehicles and its effect on bridges. There he set out the table of weight values for various axle spacings which have been recommended by the American Association of State Highway Officials as limits of safe loading for H-15 bridges. The last figures in the table indicate that 73,280 lb. would be a safe loading for a group of axles, provided the distance between the extreme axles of the group was 57 ft.

Other figures presented by the commissioner indicated, as he put it, that "of the total number of vehicles as they occur in the traffic stream, about 97.5 per cent conform in their group-axle weights with the limits of the Association's table . . ." The 2.5 percent of vehicles which exceed the group-axle weight limits "are presumably overloaded in relation to the safe capacity of H15 bridges," Mr. MacDonald added. A further breakdown of the figures indicated that of all combination vehicles, nearly 9 percent exceed the group-axle-weight limits. And "much of the excess observed is alarming in its degree," the commissioner warned.

26% of Ton-Miles "Illegal"

It was in Part V of his presentation, which considered the character of overloaded vehicles and their payloads, that Mr. MacDonald presented his estimates of the amount of traffic being handled on trucks exceeding state legal load limits. Overloaded trucks, he said, comprise a "very small minority" of all commercial vehicles, the "great bulk" of which "conform with all legal limits of size and weight and are loaded in such manner as to cause no damage to the roads."

As to the "magnitude of the overloaded movement," however, Mr. MacDonald had data derived from 1949 traffic survey weighings of loaded vehicles and vehicle-mileage figures based on traffic counts. From such data it was estimated that a total of 89.1 billion ton-miles of payload was carried by trucks of all classes on all main rural roads in 1949. Vehicles loaded in excess of state legal limits carried 23.5 billion ton-miles of that total payload, while other vehicles handling what Mr. MacDonald called the "legal move-

ment" carried 65.5 billion ton-miles.

The average payload carried in the "illegal" operations was about 15 tons, the maximum load being "considerably higher," as the commissioner noted. The vehicle mileage of the "illegal" movement was 1.5 billion miles. Meanwhile, the "legal" movement involved an average payload of "a little over 4 tons carried a total distance of about 16 million miles." Mr. MacDonald pointed out that some of these "legal" payloads were "close to 15 tons."

Illegal Operation Not Necessary

Any claim that the highway transport business "cannot be operated profitably within the law in most of the states," he went on, "is disproved by the large volume of operation that is profitably carried on without violation of the law." He added that the laws of "most states" allow "ample opportunity for economical and profitable transportation," although there may be some instances "in which maladjustments of the several limits legally prescribed results in some difficulty of compliance." As to the latter, he suggested that the limits recommended by the highway officials association "are intended to avoid these hampering inconsistencies."

Data on the extent of overloading by types of vehicles, as Mr. MacDonald summarized them, showed that three- and four-axle tractor and semitrailer combinations "are responsible for a large part of the total infraction of weight laws." As to that he referred to the experience of western states "in which there is greatest use of the longer multiple-axle vehicles," and where such vehicles have been "encouraged by the character of the laws." This, the commissioner suggested, "is indicative of the probability that similar practice encouraged by similar laws in other parts of the country would tend to reduce illegal operation and the overstressing of roads and bridges."

Parts VI and VII of Mr. MacDonald's presentation discussed, in turn, highway user tax payments in relation to highway revenues and expenditures, and the "allocation of highway tax responsibility." The former included adjusted figures indicating that 1949 receipts from "local road-user imposts and tolls" were equivalent to 68.7 per cent of the total funds made available in that year for expenditures on highways. If motor-vehicle excise taxes levied by the federal government are counted as highway-user payments, the 1949 total of all such payments was put at 5 per cent in excess of all funds made available last year for highways.

Mr. MacDonald also presented considerable data on motor vehicle tax contributions by type of vehicle. The figures, he said, made it "quite evident that heavy over-the-road freighters are required to pay road-user taxes of considerable magnitude." He added: "Whether they pay enough in relation to the costs occasioned by their use of the highways is very difficult to determine in an individual state; and much more difficult if the problem is approached from the standpoint of nationwide averages."

"Property-Tax Equivalents"

The commissioner's discussion of the "allocation of highway tax responsibility" included much reviewing of the reports on public aids to highway transportation which were made by the former Federal Coordinator of Transportation (the late Joseph B. Eastman), and the former Board of Investigation and Research. Also, in this discussion, Mr. MacDonald expressed his disapproval of the idea of levying against highway users a "property-tax equivalent," i.e., a levy to make up for taxes which the state would collect on the highway if it were a privately-owned facility. He conceded, however, that there was perhaps "some justice" in the contention that competing forms of transportation, such as the railroads, suffer disadvantage from the fact that they pay property taxes on their roadway, whereas no taxes are paid on the highways over which motor carriers operate.

"The concept of a compensating tax on the competing vehicles, designed to remove this disadvantage [Mr. MacDonald continued] should not be confused with taxation for the support of the highways. . . . In the imposition of such a tax the basis should not be the value of all roads, but only that of the small mileage of roads that offer service competitive with the railroads. . . .Payments of the tax should be required only of the small group of vehicles that are in competition with the railroads. Furthermore, those vehicles should not be taxed on the total valuation of the roads they ply in competition with the railroads. The same roads are used by large numbers of vehicles not in competitive service. The charge against the competing vehicles should be based on a pro rata of valuation. . . ."

The commissioner emphasized that he was not by this comment advocating the imposition of such a tax. He was only pointing out "the terms under which it might reasonably be imposed, if its purpose were to improve the competitive position of the railroads."

In other sections of this Part VII of presentation, Mr. MacDonald expressed his view that local property taxes should be expected to provide funds for some highway expenditures, and warned of dangers he sees in any undertaking to use gross ton-miles "alone" as a measure of road-user tax responsibility. He did not, however, condemn the use of ton-mile or passenger-mile taxes "as a part of the mechanism of taxation." When used in combination with registration fees and the gasoline tax, "such imposts may provide a means of adjusting the tax burden to an accepted standard of equity," he said.

The N.I.T. League statement said that the "threat of government ownership," about which the league is becoming "increasingly concerned," does not come from "public desire"; it is the result of "economic stress in which the railroads presently find themselves." The statement went on to express the league's general opposition to federal aid to transportation. This general policy, however, was made subject to exception "in very rare instances where private capital cannot, or will not, provide the services; or because certain transportation facilities are needed for national defense."

As to highways, the league said there was "general recognition, although not complete agreement, that motor vehicle users in recent years have contributed a fair share to the cost of providing and maintaining highways; and further progress is being made in that direction." As to waterways, it said the "benefits" of public expenditures thereon "may be measured in terms of transportation savings." It pointed out, however, that this involves "shifting the costs from beneficiaries of transportation facilities . . . to the

Walter A. Lucas

WASHINGTON IRVING CHARACTERS came briefly back to life on June 18, when the New York Central dedicated, at Sunnyside Restoration, N. Y., a new station which will allow passengers to alight directly at the entrance to the grounds of the author's former home, now restored as a public shrine. The picture shows Frederick B. Hank, general manager of N. Y. C. Lines Buffalo and East, cutting a ribbon to open the 14-ft. by 18-ft. frame station.

whole body of taxpayers." And it advised the subcommittee that "Congress should exercise timely prudence by limitations on the appropriation of public funds for waterway improvements for transportation purposes."

As to airways, the league did not believe it would be questioned that "financial assistance from public funds has been a major factor in bringing domestic air transportation to its present stage of development." A "main objective of public policy," it added, "should be to anticipate a self-sustaining system of air transportation . . . with beneficiaries paying all of the costs."

In another part of its statement, the league advocated consolidation of all transport regulatory activities of the federal government in a single agency, and suggested that such agency might well be the Interstate Commerce Commission. Also, it opposed pending bills to repeal the Bulwinkle-Reed Act. It said that rate-conference procedures sanctioned by that act (now section 5a of the Interstate Commerce Act) are "sound" and "essential."

It favored state reciprocity arrangements for motor carriers, and uniform size and weight limitations for trucks, "along the general lines which have been recommended by the American Association of State Highway Officials as a minimum." Federal legislation in this field, the league said, should provide only for conditioning grants of federal-aid highway funds on adoption by the beneficiary states of size and weight limits recommended by the federal government.

As to coordination of services and consolidations of carriers, the league "is strongly in favor" of encouraging the carriers to coordinate, "both within a single field and different fields, to the end that each carrier will perform . . . the service for which it is best adapted." Consolidations, the league believes, should be voluntary; but it also believes that one form of transportation should be permitted to enter another transport field—subject to "sensible restrictions . . . to insure against unreasonable restraints of competition." Specifically, it favors repeal of those provisions of the Panama Canal Act which forbid operation by railroads of water lines or services.

The statement discussed the proposed St. Lawrence seaway briefly, recalling that the league has already registered with Congress its opposition to this project on the ground that it is "economically unsound." Also reiterated was the league's advocacy of repeal of the taxes now levied on amounts paid for for-hire transportation.

The statement then went on to complain that I.C.C. decisions in car-spotting cases "have jeopardized the integrity of the American system of freight rates." The Interstate Commerce Act, the statement added, "should be amended so that the transportation obligation of the railroads (as well as other agencies of transportation) is what the carriers themselves have defined it to be—regardless of what the commission may choose to declare—and extends from the place of origin . . . to the final place at destination, so that the basic freight rates will continue to cover inclusively all services at origin and destination as well as across the country."

Other positions taken by the league were in opposition to any extension of the Interstate Commerce Act's commodities clause, and to all "make-work" legislation. In the latter connection, it mentioned specifically pending bills to give the I.C.C. regulatory authority over railroad communication facilities and operating rules in connection therewith, and rules in connection with signaling facilities over which the commission already has jurisdiction.

Other presentations received by the subcommittee this week were made at the June 27 session of its hearings by Joseph H. Kuhner, who spoke for the Association of Highway Steel Transporters; Clarence D. Todd, general counsel of the Contract Carrier Conference, American Trucking Associations; and Charles F. Hawes, traffic manager of the Dairymen's League Cooperative Association, who spoke for the National Council of Farm Cooperatives. Mr. Kuhner complained about reductions in railroad rates on iron and steel articles. Mr. Todd opposed railroad proposals which would subject contract motor carriers to additional regulation. Mr. Hawes, argued in favor of retaining the so-called agricultural-commodity exemption in the Motor Carrier Act.

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Switchmen's Strike Slows G.N.; Halts 4 Others

The threatened strike of the Switchmen's Union of North America over its demand for a 40-hour week with no decrease in pay and other concessions took effect at 6 a.m. on June 25 against five major western railroads. All service on the Chicago, Rock Island & Pacific, the Chicago Great Western, the Western Pacific and the Denver & Rio Grande Western has been halted, although the Great Northern is continuing to operate passenger service to a limited extent on its main lines.

In a special report to *Railway Age*, the Great Northern said that as of noon on June 28, principal main-line passenger and mail trains were operating, and that service was also being provided between St. Paul, Minneapolis, Duluth, Winnipeg, Man., and Vancouver, B. C. All service has been suspended on 35 branch and secondary lines in Minnesota, North and South Dakota, Iowa, Montana, Washington and Idaho because of the difficulty in getting crews to operate the trains. Main-line freight service is virtually at a standstill although the road made "special efforts" to move its heavy iron ore traffic because of the urgent requirements of the furnaces at the lower end of the Great Lakes. Some of this traffic was moved after the strike began, but the road was forced to stop because train crews refused to cross picket lines. If the strike continues through June 30, less than 5,000 of the railway's total of 28,000 employees will be working.

Spokesmen for the other struck carriers indicated that only skeleton forces are being maintained and that no attempt is being made to operate any service. The Rock Island reported that a few men are assigned to the protection of company's property, but that the strike of its 1,500 S.U.N.A. members had idled 22,000 employees.

On June 22 President F. B. Whitman of the Western Pacific issued a statement to all employees, giving in full detail the events leading up to the strike action and emphasizing that the switchmen are flouting the findings of a Presidential board which "are not idle gestures." Issued before the strike actually became effective, the statement declared that if the officers of the switchmen's organization "take such irresponsible action," the result of their actions "will be the loss of their members' earnings for the duration of the strike, a shocking disregard for the welfare of practically all of their fellow employees in other crafts, a severe blow to the railroads which had, in the past, signed contracts with the switchmen's union and a serious

(Continued on page 75)

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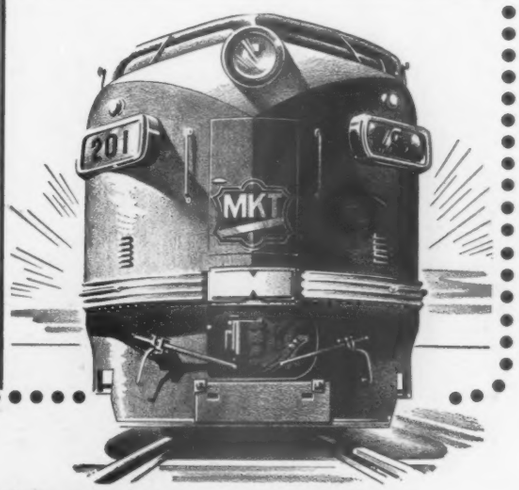

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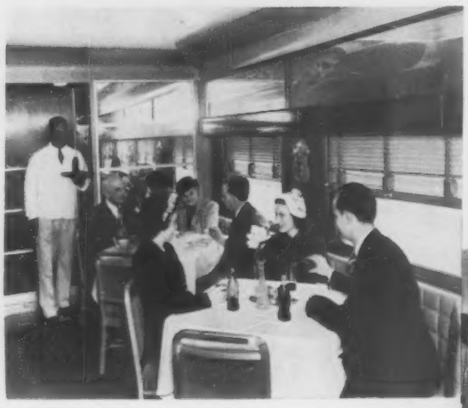

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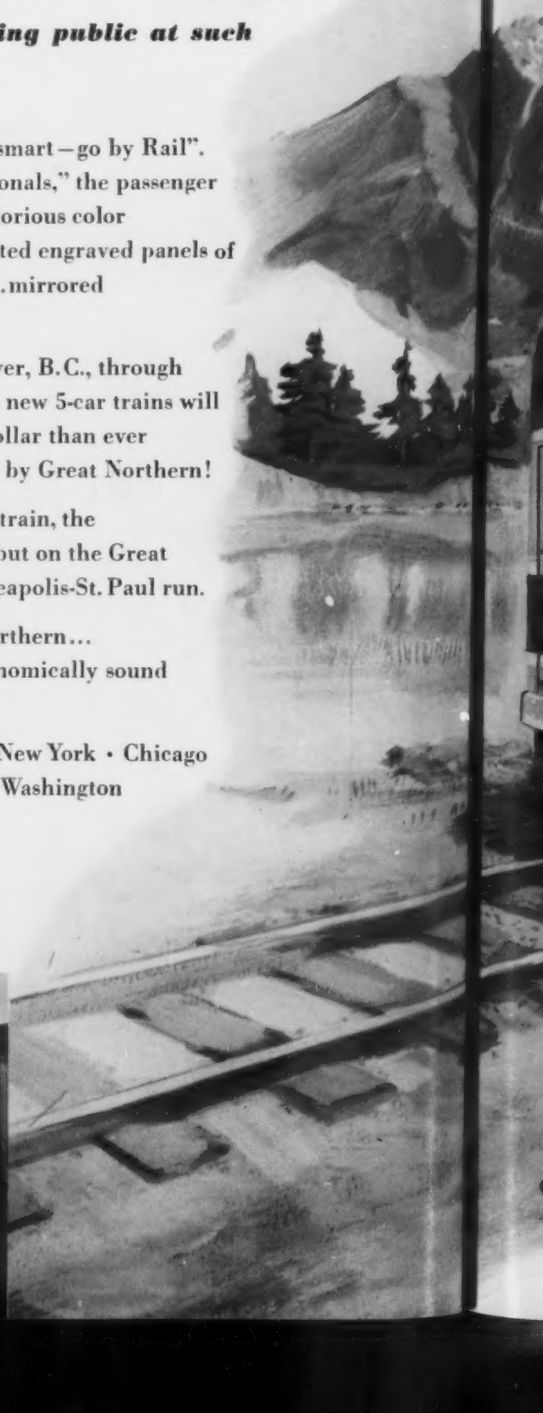

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"This Is No Time for a RR Strike," Senator Morse Warns

Senator Morse, Republican of Oregon, said on June 29 that "this is no time for a railroad strike in America," and that the striking switchmen "should go back to work." The Senator, who was chairman of an emergency board which investigated a 1941 case and mediated a settlement after the involved unions refused to accept its report, made the foregoing statement at hearings a Senate subcommittee was holding on the Donnell anti-strike bill.

While he indicated misgivings about the bill, Senator Morse expressed his feeling that "this strike must be brought to an end, and the threat of a July 15 strike must be brought to an end." He went on to say that "friends of railroad labor had better advise them that this is not the time to use economic force." As for himself, the Senator would tell the unions that "the truth of the matter is you've tried your case and lost it," so the thing to do is "take the loss and move on from there." Representatives of the carriers and employees, he also said, should "get together in some hotel" and settle the issues.

(Continued from page 70)

hardship to the public." Mr. Whitman went on to say that if the strike took place his road would enter into no direct negotiations, but leave the case for the Carriers Conference Committee of the Association of Western Railways.

In a press release distributed the following day, after the road had shut down, a portion of which was delivered in person by Mr. Whitman over radio station KFRC, San Francisco, the W.P. head stated that, "In opposing unjustifiable wage and rules demands, the railroads involved are fighting the public's battle." It is reported that, due to embargo control, only two cars of freight in transit were on W.P. tracks when the strike became effective. The subsidiary Sacramento & Northern is not affected by the walk-out.

In an attempt to locate a formula by which the strike might be ended, Chairman Francis J. O'Neill and Leverett Edwards of the National Mediation Board have been holding separate conferences in Chicago with representatives of the carriers and union negotiators, but as of June 28, these meetings have been characterized as "exploratory" and no common ground has been found. Mediators O'Neill and Edwards also held a conference on June 26 with Roy O. Hughes, president-elect of the Order of Railway Conductors in connection with the possible nation-wide walk-out on July 15 by the O.R.C.'s. membership along with that of the Brotherhood of Railroad Trainmen following the forthcoming joint meeting of their general chairmen scheduled for July 10, in Chicago. (See *Railway Age* of June 24, page 104.)

The Railroad Yardmasters of America also threaten to strike on July 15 over the same issues as the conductors and trainmen insofar as they affect their craft. Upon agreement of all concerned, except the switchmen, a Presidential emergency board had heard a consolidation of all major and similar issues involved in the trainmen-conductor and yardmaster demands. The switchmen refused to go along with necessary extensions of time required for this amplified hearing, although they awaited its outcome and the board's recommendations before taking strike action. Subsequent mediation efforts by Chairman O'Neill continue and the mediation board has announced its intention to hold conferences also with Yardmaster President M. G. Schoch, but, as *Railway Age* goes to press, Mr. O'Neill's busy schedule has not permitted his doing so. Mr. Schoch has denounced the recent finding of the fact-finding board, which recommended a reduction in yard employees' work week from 56 and 48 to 40 hours with an increase of 18 cents in hourly pay. Asserting that a 30-cent raise is necessary to maintain the take-home pay of the longer work week, he said that the board's report "definitely raises the possibility of a strike by the union on July 15 or thereafter."

Announcement of the strike call brought forth an Interstate Commerce Commission order authorizing the affected roads to disregard routings and reroute traffic over any available open routes. The order is Revised King's I.C.C. Order No. 26. It was issued by Homer C. King, director of the commission's Bureau of Service, pursuant to I.C.C. Service Order No. 562, which makes him the commission agent to authorize diversion of cars whenever, in his opinion, an emergency exists. The order became effective on June 23—as to the W.P., Rock Island, C.G.W., and D.&R.G.W. Amendment No. 1, issued June 28, extended the order's coverage to the G.N.

Meanwhile, Congress, where the Donnell anti-strike bill is pending before the Senate committee on labor and public welfare, has received another proposal which would make a different approach toward the same goal. It is embodied in a bill, H.R. 8948, introduced in the House by Representative Smith, Republican of Kansas. It would amend the Railway Labor Act to provide that employees participating in "concerted action" to force settlements more favorable than those recommended by emergency boards could not be retained in the employ of the affected railroads "during the period of two years following the date of such concerted action." Violations by railroads would be punishable by fines, not exceeding $1,000 for each offense.

"Mossbacks" Oppose Air Transport Subsidies—Truman

President Truman last week put the "mossback" label on opponents of federal aid to air transportation. Speaking June 24 at the dedication of Baltimore's new Friendship International Airport, which was built with the help of a $2,212,500 federal grant, the President said that air transportation "has had to overcome not only foolish prejudices and fears, but the opposition of those who did not want its competition."

He added that "if we had listened to the mossbacks who complained about competition, we would never have given up the stage coach." Earlier in his address, Mr. Truman had said that "there were people who scoffed at the building of railroads through the uninhabited areas of the West."

"Competition between different kinds of transportation [the President also said] is one of the things which go to make our economy a vital and effective one. We must have and we will have in this country a modern and efficient air transport system to help meet our needs for rapid transportation.

"In developing such a system, the federal government has a great part to play. Air transport is of concern to the nation as a whole. It is a growing element in our interstate and foreign commerce. Like all transportation systems, it is important to our national defense. Recognizing these facts, our government has provided various kinds of aid in the development of our aviation industry, just as it has done from time to time for other types of transportation."

While the President was thus castigating critics of air line subsidies, Secretary of Commerce Charles Sawyer, speaking at a June 28 dinner of the Baltimore Association of Commerce in connection with the airport dedication, said "Progress is being made in the development of a system of user charges," which, he declared, "would not only be a businesslike test of the usefulness of government-promoted facilities, but would also help repay what the railroads have already repaid, namely, the government's investment in new industries." Such user charges, he said, "would, in addition, tend to place all forms of transport on a more equitable competitive basis."

Earlier in his address, the secretary had said:

"In our enthusiasm for the new we some times tend to forget the value of the old. We cannot afford to make this error in respect to our transportation facilities. . . . In peace and in war, the conduct of this nation's business requires all forms of transportation . . . The federal government has a vital interest in seeing that all forms of transportation are in good working order. . . .

"There is much room for improvement in present transportation activities of government. . . .

"Today all forms of domestic transportation, except railroads and pipelines, receive government help either from subsidies or from federal provision of facilities such as airway markers, airports, highways, inland waterways, harbor developments, weather reports, maps and charts, and

other aids to navigation. The grand total of federal expenditures for transportation in the fiscal year ending this June 30 amounts to $1.5 billion. . . .

"It is our policy that no competitor, or class of competitors, should have special privileges or undue advantages. In this respect, competition among the various forms of transportation presents some perplexing problems; federal action, certainly, do result in some inequality of treatment of the various forms of transportation.

"The great difficulty with giving federal funds is knowing when to stop. Aid that is freely given, because it is necessary for adequate development toward independence, must not be prolonged to the point where it becomes an unnecessary crutch, the use of which develops unhealthy dependence.

Chicago Traffic Club Hears Of British Transport

Transportation — nationalized, was explained to the Traffic Club of Chicago by members of a 16-man "freight handling team" comprised of representatives of British railways, "road haulage" operators, dock operators, labor unions and shippers at a special luncheon on June 22. Sponsored by the Economic Cooperation Administration, the team is a portion of the Anglo-American Council on Productivity; its purpose is to study American techniques and methods with a view to their possible application to, or modification of, present methods in England.

Arthur C. B. Pickford, leader of the team, and a member of the British Railway Executive, opened the discussion with a summary of the steps taken between the end of World War I, when there were 123 separate railway companies in Great Britain, and the Transport Act of 1948, when all railway lines, except a few narrow gage properties, were united under public ownership. He also summarized the present functional and geographic organization of the British Transport Commission and of its various "executives," which directly operate nationalized railroads, truck lines, hotels, docks, and urban passenger services. "Unscrambling" of nationalization, which he admitted would be a very complicated process, is not being considered at present, even by the Conservative party.

Passenger fares and freight rates, he said, are subject to government control and must be published, although, in contrast, rates of truck operators are fixed by that industry alone, and do not have to be published. "Because the railways were not permitted to increase charges in proportion with increased cost of labor and materials," the overall financial picture under nationalization is not one of success. Passenger fares are about 55 per cent above pre-war levels, while freight rates will soon be up about 81 per cent. Mr. Pickford contrasted this with increased costs of certain materials which must be imported—lumber for ties, for example, being nearly 200 per cent more expensive, and wages about 100 per cent above pre-war averages.

The trucking industry ("road haulage") has been split into two distinct groups under the Transport Act, according to Richard L. H. Farmer, a managing director of a private trucking concern. The division is based on the radius of operations of the individual carrier. Local truckers with operations limited to a 25-mi. radius have not been nationalized, and, although limited to their particular sphere of operation, are otherwise operating as before. Long-distance operators, on the other hand, are being regrouped into a single organization under the Road Haulage Executive. The status of former railroad-owned trucking subsidiaries, which operated in both long-haul and pick-up service, has not been finally established. Livestock haulers and certain other specialized truckers, along with privately-owned, non-carrier trucks, have not been affected.

Differences in England

Vehicle differences brought about by legislative limitations in England, Mr. Farmer said, make comparison with American operation difficult. In England, he explained, a 3-ton vehicle is limited to speeds of 20 mph. and lighter trucks are only permitted 30 mph., hence trucks are built to much lighter specifications and the character of service is somewhat different than in the United States. Mr. Farmer, whose firm is engaged primarily in the pick-up and delivery field, was "astonished" at the large number of trailers American truckers operate in relation to the number of tractor units. Mr. Farmer said that in addition to fuel, oil and license fees, British truck operators pay a "road fund tax" based on the weight of each vehicle operated. This tax, he said, is supposed to compensate for the industry's use of the highways.

Leslie G. Taylor, a member of the Docks and Inland Waterways Executive, explained that only those docks operated by the railways prior to the Transport Act were covered by the nationalization move.

All the speakers refrained from discussing political aspects of nationalization, and side-stepped the question of possible nationalization of American railroads by saying that they were insufficiently acquainted with problems peculiar to this country.

B.&O. Extends "Time-Saver" Freight Service

Effective June 26, the Baltimore & Ohio extended its "Time-Saver" freight service to St. Louis, Mo., to provide second-morning delivery of l.c.l. shipments from New York and other east coast points served by the road. At the same time, eastbound schedules for l.c.l. freight from the St. Louis area to east coast cities were similarly stepped up.

The new St. Louis service is an extension of faster l.c.l. service inaugurated several weeks ago by the B. & O. and other roads between New York and Chicago, Cincinnati, Ohio, Indianapolis, Ind., Louisville, Ky., and other eastern and midwestern cities. (See *Railway Age* of April 15, page 65, and May 20, page 179.)

Pan American Commission Names Advisory Committee

An industrial advisory committee, to advise on technical problems and other matters relating to production, distribution and utilization of railway and related equipment, was appointed by the United States National Commission in the Pan American Railway Congress Association at its third meeting in Washington, D. C., on June 20. The commission indicated that such a committee should be able to assist materially in carrying out the primary objective of the association—promoting development and progress of railroads on the American continents.

Members of the advisory committee are S. M. Felton, president, American Railway Car Institute; Manuel Alonso, American Locomotive Company; Nelson C. Dezendorf, General Motors Corporation; B. T. Anderson, Union Switch & Signal Co.; Max K. Ruppert, P. & M. Co., and C. L. Heater, American Steel Foundries.

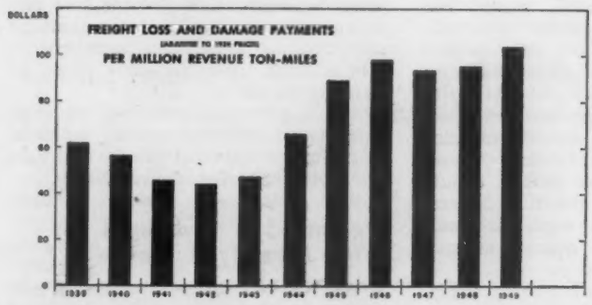
All members of the U. S. National Commission were recommended to serve as delegates to the seventh congress of the association, to be held at Mexico City, October 10-20. Also recommended as delegates were Walter S. Abernathy, of the transportation division of the U. S. Department of Commerce, and executive secretary of the U. S. Commission; Kenneth N. Hynes, assistant attache, American Embassy, Buenos Aires, and U. S. resident member of the permanent commission of the association, and H. H. Kelly, of the office of transportation and communication policy of the U. S. Department of State.

Railroads Carry 38,000 Scouts to Valley Forge

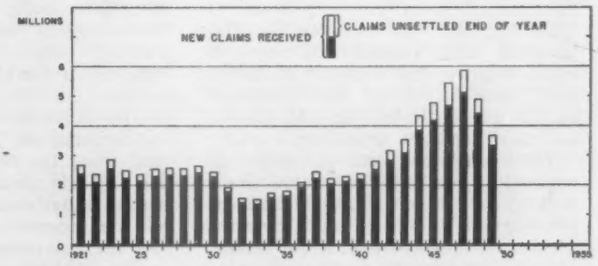
Some 47,000 Boy Scouts of this and other countries are attending the "National Jamboree" at Valley Forge, Pa., which opened on June 30 and closes on July 6. Scout officials estimate that about 38,000 of the boys will travel to and from Valley Forge by train.

The Pennsylvania will use 150 locomotives, 350 coaches, 100 baggage cars, 75 sleeping cars and 75 dining cars to bring over 20,000 scouts, its portion of the huge two-way movement, to the station at Betzwood, Pa., just across the Schuylkill river from the Valley Forge campsite. For the "Jamboree," described as one of the largest coordinated rail movements in history, the Baltimore & Ohio will operate 35 special trains and add hundreds of extra cars to regular trains. At Phila-

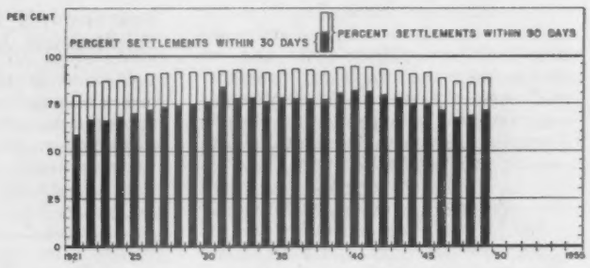
THE 1949 FREIGHT-CLAIM STORY



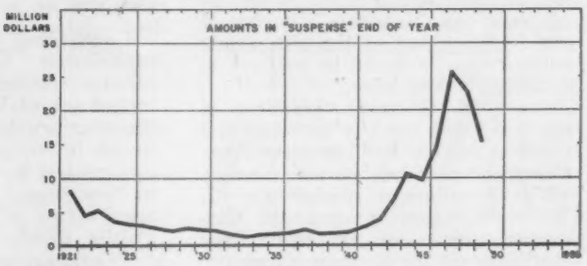
A FINAL TALLY of America's railroad freight loss and damage bill, recently released by the Association of American Railroads, shows a total of $113,844,712. This figure represents a reduction of nearly 15.9 per cent, or $21,545,952, over the 1948 bill, and a reduction in the ratio of loss and damage to gross revenue from 1.61 to 1.53 per cent. The 1949 figure on the graph above is considerably distorted due to inclusion of items from the "suspense" account of 1948 and previous years which were adjusted in 1949. Nearly 65 per cent of the 1949 loss and damage total represents prior business not associated with 1949 traffic



NEW CLAIMS (top, right) dropped 23.4 per cent under the 1948 figure to a total of 3,745,785. A continued decrease in over, short and damage reports leads the A.A.R.'s Freight Claim Division to forecast an even lower figure for 1950



BETTER PERFORMANCE (center, right) in adjusting claims is shown by the increased per cent of the total that were adjusted within 30 and 90 days of receipt



SUSPENSE ACCOUNTS (bottom, right) held $15,029,347 at the close of 1949. Most of this amount — a reduction of 34.2 per cent over the 1948 figure — will be charged to claim accounts of the involved carriers during 1950

delphia, Pa., the special trains and cars will be switched directly to the Reading, the only line having rail passenger service into Valley Forge. Scouts coming in on the B. & O. from the west will have their cars switched to the Western Maryland at Cherry Run, W. Va., for delivery to the Reading at Shippensburg, Pa. The Reading set up a program calling for 110 special trains, requiring the use of about 50 locomotives and 450 cars of various types, to handle the vast assemblage.

N.&W. to Abandon Electric Operation

Coincident with the opening on June 26 of its new Elkhorn tunnel and of a 5.27-mi. line relocation between Lick Branch, W. Va., and Cooper, the Norfolk & Western has announced plans to abandon electric operation on its main line between Bluefield, W. Va., and Iaeger, 52.5 mi., and on approximately 24 mi. of branch line. Removal of electric facilities, some of which have been in service since 1915, will be undertaken "within a few days."

"With the many improvements made in recent years in the coal-burning steam locomotive [the road's announcement said in part] the availability and power of the railway's modern heavy-duty steam locomotives compare favorably with the old electrics which are to be dispensed with. Operation of steam power exclusively through the old-single-track Elkhorn tunnel was not practicable on account of the heat and gases experienced at low speeds, necessitating the use of electric helpers. With the new double-track tunnel and its extra height, ample space is afforded for dissipation of the heat and gases, thus permitting utilization of steam power altogether and making it no longer necessary to operate electric helpers. This will result in only one type of power (coal-burning steam) to be maintained and serviced. . . . . In discontinuing the use of electric locomotives, the N. & W. will become one of the few railroads in the country whose ownership of motive power will all be coal-burning steam units. By taking this step, the railway reaffirmed its faith in the modern coal-burning steam locomotive."

The new 7,052-ft. Elkhorn tunnel was officially opened at 3:40 p.m., June 26, with the passage through it of train No. 26, the eastbound "Powhatan Arrow," in the presence of railroad officers, contractors, and press and radio representatives. The tunnel is the longest on the N. & W., and, with its inside height of 32 ft. and width of 31 ft., is said to be the largest double-track railroad tunnel in the world. Its construction, under way since January 1, 1948, required 93,000 cu. yd. of concrete reinforced with 1,100,000 lb. of steel. For the present, it will be used only by eastbound trains, with westbound trains continuing to use old Elkhorn tunnel until all track and signal work in the new bore is complete.

The Lick Branch-Cooper line relocation, 11 mi. west of Bluefield, reduces maximum curvature from 13 deg. to 4½ deg.; cuts maximum compensated eastbound grade from 2 per cent to 1.4 per cent, and virtually eliminates the former 1.1 per cent westbound grade.

The tunnel and line relocation were carried out under the general supervision of N. & W. Chief Engineers W. P. Wiltsee (now retired) and A. B. Stone, with B. E. Crumpler, assistant engineer, and C. W. Fiery and Roscoe Porter, resident engineers, in charge in the field. The Sturm & Dillard Construction Co., of Columbus, Ohio, and Haley, Chisholm & Morris, of Charlottesville, Va., were the contractors.

Several construction pictures are shown in the article "Operation Fast Freight," on page 40 of this issue.

Three Shippers Boards Meet

"A substantial increase in new car orders during the next 60 days to replace cars that are retired" was predicted by E. W. Coughlin, manager of railroad relations of the Association

of American Railroads, at a one-day conference of the executive and railroad contact committees of the Allegheny Regional Advisory Board at Wheeling, W. Va., on June 22. Mr. Coughlin also pointed out ways in which shippers and receivers of freight can "produce more cars" through heavier and faster loading and quicker and more complete unloading.

The committees went on record as opposed to the so-called "union shop" bills (S. 3295 and H.R. 7789) now pending in Congress, and deferred action on the Donnell "anti-strike" bill (S. 3463) until the board's September meeting.

A resolution recommending "that the railroads generally immediately review their car requirements and increase their car building program" and urging extension of car repair programs was adopted by the Pacific Northwest Advisory Board at its 77th regular meeting, which was held in Seattle, Wash., on June 22. The board also adopted a similar resolution directed at railroads operating in the board's own territory, and a legislative committee report opposing the Donnell bill on the ground that, while its purposes are "desirable," it "would put in the hands of the government authority which should be confined to management and labor."

Avery M. Cloninger, president of the board and manager of traffic and warehousing for the Longview Fibre Company, presided at the meeting, while the principal speaker was W. Walter Williams, president of Continental, Inc., and immediate past chairman of the National Committee for Economic Development. C. W. Taylor, manager of the A.A.R.'s Refrigerator Car Section, told board members "everything possible" is being done to relieve car shortages in the Pacific northwest.

The Pacific Coast Transportation Advisory Board held its 82nd regular meeting at Oakland, Cal., on June 15 and 16, with General Chairman J. W. Witherspoon, assistant general traffic manager of the United States Rubber Company, presiding, and William B. Tyler, president of the California manufacturers Association and vice-president of the California & Hawaiian Sugar Refining Corp., as principal speaker at a luncheon sponsored jointly by the board and the Chamber of Commerce, Traffic Club and Women's Traffic Club of Oakland. "Don't stop talking and griping about high taxes and excessive government and deficit financing." Mr. Tyler said in part, but "let's talk and gripe where it will do the most good. Not to ourselves, but to people everywhere."

The board went on record as favoring the Donnell bill.

Effective Date of Rail-Barge Differentials Again Set Back

The Interstate Commerce Commission has further postponed, from July 31 until December 31, the effective date of its order requiring railroads and water carriers on inland waterways to establish through routes and joint rail-water rates reflecting differentials under all-rail rates. The postponement order noted that the railroads' appeal in the case is now pending in the United States Supreme Court.

The order also said that the work of checking out the routes and rates and filing the required tariffs "would be of such magnitude that it should not be undertaken at this time because of the expense and work involved." On the commission's docket the case is No. 26712.

Bus Group's Bulwinkle-Act Application Approved by I.C.C.

Division 2 of the Interstate Commerce Commission has conditionally approved a rate-procedures agreement filed under the Bulwinkle-Reed Act (now section 5a of the Interstate Commerce Act) by some 300 common-carrier bus operators as members of the National Bus Traffic Association. The condition requires that the agreement be amended to provide that any common-carrier bus operator shall be admitted to association membership, "as a right, upon the same terms as existing members."

Pending the adoption of such an amendment, the commission withheld entry of its approval order. The case is Section 5a Application No. 9.

Pullman-Standard Signs for $100 Monthly Pensions

A $100 monthly pension and a new program of insurance for employees of the Pullman-Standard Car Manufacturing Company were among the terms of a contract which the company has signed with the C.I.O. United Steelworkers union. The terms of the contract are basically similar to those which the union obtained recently from the nation's steel industry. The new

New Jersey Study Shows Heavy Truck Use Doubles or Triples Highway Maintenance Costs

Convincing evidence of "close correlation between [highway] surface maintenance costs and the frequency of heavy axles of combination truck units" is contained in an investigation of road damage caused by trucks to highways in New Jersey by the Trenton district office of the United States Public Roads Administration.

"Comparisons show," the study concludes, "that where these vehicles [heavy trucks] are infrequent costs per mile of surface maintenance are in the vicinity of $100. These costs double and triple on the heavy trucking routes. . . . It seems reasonable to believe that the increasing surface maintenance costs found inevitably point to reduced life of pavements subjected to such excessive loads."

The study—completed March 31 but only recently released—covers four pairs of comparable highway sections—one pair in south Jersey, two pairs in the central part of the state, and one pair in northern Jersey.

"In selecting the various pavement sections which were studied," the report says, "an attempt was made to select one section on a route heavily travelled by trucks and another on which the trucks were relatively less important. In so far as possible the sections were chosen so that other variables were reduced to a minimum, i. e., the sections were relatively close together geographically and the width, thickness and joint details of the pavements were identical or almost so. It was not always possible to select pavement of exactly the same age; however, it was generally possible to avoid bias by selecting a slightly newer pavement on the 'truck' route. The study locations were chosen so that the section on the truck route was reasonably close to one of the loadometer stations where truck weight information was available. Total traffic volume was also considered and with one exception all sections are on relatively high volume roads."

Detailed maintenance cost figures were taken from records of the accounting division of the New Jersey Highway Department; costs of maintaining shoulders, slopes, drains, guard rails, etc., were eliminated and only the costs of maintaining the main pavement were included in the study.

The study also showed "about a 15,000-lb. increase in truck loading practice since the war and an increasing number of excessive axle and overall vehicular weights . . . "; and revealed that, although New Jersey truck weight limits "are much more liberal" than in many other states, "they are frequently broken."

Comparative costs developed by the study are summarized below:

Highway Pair	Study Period	Average Surface Maintenance Costs per Mile		Ratio—Truck Route to Non-truck Route
		Truck Route	Non-truck Route	
A (South)	7 yrs.	$273	$41	6.6
B (Central)	10 yrs.	319	131	3.5*
C (Central)	10 yrs.	238	49	4.9
D (North)	7 yrs.	120	94	1.3

*Adjusted for greater pavement width on non-truck route.

agreement covers 8,000 employees of Pullman-Standard's plants at Hammond, Ind., Worcester, Mass., Butler, Pa., and Bessemer, Ala. The added cost of the contract to the company has not yet been announced.

Railroad Fined

The Interstate Commerce Commission has been advised that on June 16 the Seaboard Air Line was fined a total of $1,000 after pleading nolo contendere in the United States District Court for the Northern District of Alabama to a four-count information charging violation of section 1(7) of the Interstate Commerce Act. The commission's notice, issued by Secretary Bartel, said the road was fined $250 on each of the four counts. The information charged the railroad "with unlawfully giving passenger tickets and transportation free and without collection of the lawful tariff fares to the president of a Birmingham, Ala., radio station."

Engineers Support Rail Plea For Long-Haul Trucking Study

The Brotherhood of Locomotive Engineers has applied to the Interstate Commerce Commission for authority to intervene in any proceeding which the commission may institute in response to the pending railroad request for an investigation of "long-haul" highway transportation. The petition, indicating the brotherhood's purpose to support the railroads' proposal, was similar to one filed earlier by the Brotherhood of Railroad Trainmen.

Meanwhile, the Railway Labor Executives' Association recently rescinded a decision which would have authorized its counsel to file a like petition. The rescinding action was the first specific step taken by R.L.E.A. in line with its new policy of suspending all cooperation with railroad management on problems of mutual interest. (See *Railway Age* of June 24, page 107.) The B. of L.E. and B.of R.T. are not affiliated with R.I.E.A.

News Briefs . . .

. . . The Minneapolis, St. Paul & Sault Ste. Marie has announced that repairs have been completed on its line between Drake, N.D., and Fordville, and that service was resumed on June 22. Operation of this line was suspended on May 4 due to high water and washouts.

. . . The Texas & Pacific will convert five passenger coaches into baggage-express cars for use on its "Eagle" trains.

. . . New streamlined coaches and a streamlined sleeping car will be added to the Chicago & North Western's "North American" coincident with a two-hour reduction in running time to take effect July 9. The sleeping car, containing section, roomette and double-bedroom accommodations, will operate on the daytime "North American" between Minneapolis-St. Paul and Omaha and on the "Los Angeles Limited" between Omaha and the Pacific coast.

. . . A resolution calling for a return to the 20-ton weight limit for highway truck trailers; a change in the law which now permits heavy, out-of-state trucks to use the state's highways free, and an increase in license fees for heavy commercial trucks, has been passed by the Association of Township Officials of Illinois. The resolution stated that "Experience has proven that excessive weights now permitted are responsible for the premature destruction of roads and bridges in this state." The increased license fees, the resolution continued, would require the trucks to pay their just share of the cost of construction and maintenance of roads.

. . . The Missouri Pacific "News Reel" reports that the road's bridge near Lincoln, Neb., was washed out by heavy rains, and would have to be replaced at a cost of about $500,000. Several highway bridges in the area were also destroyed and the report states that while they will, no doubt, eventually be replaced, heavy highway hauling trucks have diverted their operations to other routes until the taxpayers replace the ruined bridges.

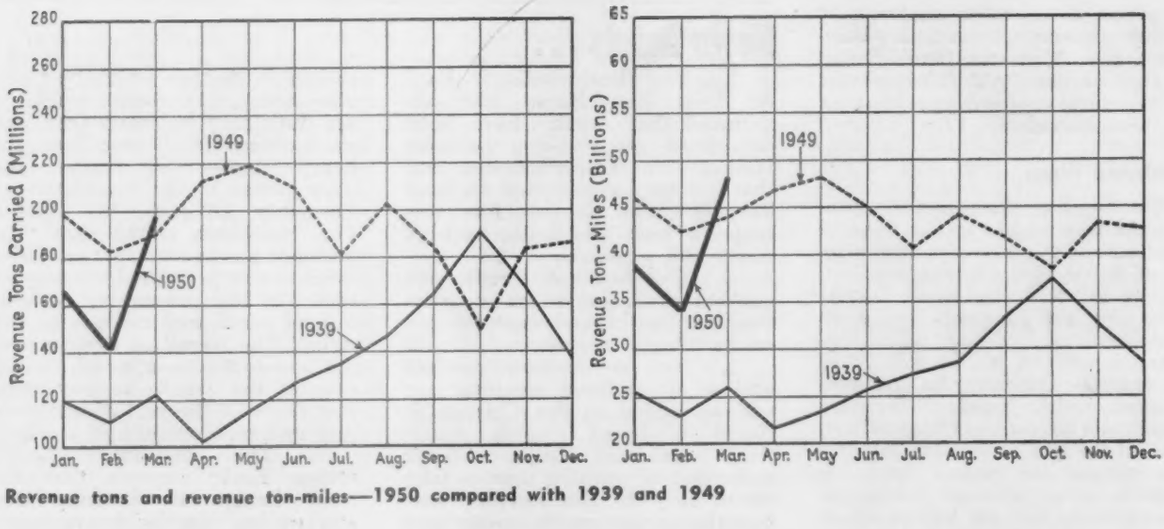
"Cincinnatian" Starts Detroit-Cincinnati Run

The Baltimore & Ohio's coach streamliner, the "Cincinnatian," began operating between Cincinnati, Ohio, Toledo and Detroit, Mich., on June 25, the day after its last run from Baltimore, Md., to Cincinnati. (See *Railway Age* of June 17, page 83.) On the new run the train replaces the "Great Lakes Limited," operating on the latter's schedule, which calls for departure from Cincinnati at 1 p.m., eastern standard time, and arrival in Detroit at 7:15 p.m. Southbound the "Cincinnatian" leaves Detroit at 2:45 p.m., and arrives in Cincinnati at 9 p.m. The train will carry a mail car in addition to three coaches, lunch counter-cafe car and combination diner and observation car.

Freight Car Loadings

Loadings of revenue freight in the week ended June 24 totaled 810,152 cars, the Association of American Railroads announced on June 29. This was

BELIEVED TO BE America's first suburban, multiple-unit motor train, the Chicago & North Western's three Budd rail Diesel cars, shown here at delivery, have been handed a 2,330-mile-per-week assignment servicing all three of the road's suburban divisions. The train, which is composed of three RDC-1 units, will be operated under varying conditions to permit the North Western to explore its full economic and operating advantages



Revenue tons and revenue ton-miles—1950 compared with 1939 and 1949

an increase of 7,211 cars, or 0.9 per cent, above the corresponding week last year, and a drop of 78,216 cars, or 8.8 per cent, below the equivalent 1948 week.

Loadings of revenue freight for the week ended June 17 totaled 805,680 cars, and the summary for that week as compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, June 17

District	1950	1949	1948
Eastern	143,841	112,802	160,591
Allegheny	165,231	123,025	185,937
Pocahontas	60,882	21,259	75,930
Southern	124,296	95,392	139,723
Northwestern	125,058	130,038	135,387
Central Western	127,117	113,675	137,468
Southwestern	59,255	53,160	71,595
Tot. Western Districts	311,430	296,873	344,450
Total All Roads	805,680	649,351	906,631
Commodities:			
Grain and grain products	48,296	53,656	54,421
Livestock	7,283	7,173	10,835
Coal	142,844	36,855	204,559
Coke	14,957	10,112	14,878
Forest products	48,039	39,219	48,857
Ore	79,983	78,986	81,336
Merchandise l.c.l.	82,099	90,674	105,187
Miscellaneous	382,179	332,676	386,558
June 17	805,680	649,351	906,631
June 10	795,852	808,156	906,663
June 3	709,587	698,824	821,206
May 27	780,959	784,824	904,757
May 20	743,307	773,910	879,177
Cumulative total 24 weeks	16,293,754	17,289,959	19,181,864

In Canada.—Carloadings for the week ended June 17 totaled 79,919 cars, compared with 79,977 cars for the previous week, and 74,493 cars for the corresponding week last year, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
June 17, 1950	79,919	32,618
June 18, 1949	74,493	30,733
Cumulative totals for Canada:		
June 17, 1950	1,712,251	732,484
June 18, 1949	1,732,895	759,823

Sees Railroads Losing Florida-Orange Traffic

Trucks and boats hauled a larger proportion of the Florida-orange shipments to nine leading markets in 1949 than in 1948, and the railroads hauled a smaller proportion, according to a study made in the Bureau of Agricultural Economics of the United States Department of Agriculture. The study, by Donald E. Church, transportation economist, appears in the June issue of "The Marketing and Transportation Situation," a publication of the bureau.

As summarized in a statement issued by the department, the study showed that the shift from rail transportation to trucks and boats in 1949 resulted in the railroads hauling to the markets involved about 2,800 fewer carloads of oranges than they would have hauled if they had maintained their relative 1948 position. The markets were New York, Boston, Mass., Chicago, Washington, D. C., St. Louis, Mo., Atlanta, Ga., New Orleans, La., Los Angeles, Cal., and San Francisco. The revenue loss to the railroads was put at $1,250,000.

OVERSEAS

East Africa.—A group of four or five American technicians, including an economist and accountant as well as railway engineers, will make before October 1 a three-month survey of railway facilities in and between Southern Rhodesia and Portuguese Mozambique, according to a recent announcement by the Economic Cooperation Administration. The study, which will also cover port facilities at Beira and Lourenco Marques in Mozambique, is intended to determine what improvements in present facilities, or what additional facilities, are needed to promote development of Mozambique, Northern and Southern Rhodesia and Nyasaland, with particular reference to the agricultural and mineral resources of the Rhodesias. Existing facilities are believed to be inadequate for the traffic load anticipated after 1952. Dollar costs of the survey, estimated at $57,500, will be paid out of Marshall Plan funds; other costs will be paid by the Southern Rhodesian and Portuguese governments.

Pakistan.—American manufacturers have been invited by this country's Ministry of Communications to submit bids for supplying 10 Diesel rail cars, 5-ft. 6-in. gage, with spare parts for 3 years and an extra truck, for the North Western Railway, according to a recent issue of Foreign Commerce Weekly. Bids will be considered only from manufacturers who have previously built Diesel rail cars of the required power and size. Specifications, as well as conditions of contract and instructions to bidders, may be borrowed from the Commercial Intelligence Branch, Department of Commerce, Washington 25, D. C.

SUPPLY TRADE

The **Waterbury Battery Company** announces the moving of its plant from Waterbury, Conn., to a four-building plant site in Plainville, Conn.

R. E. Dietz Company will move its main offices and warehouse from 60 Laight street, New York, to facilites provided at the manufacturing plant, 225 Wilkinson street, Syracuse, N. Y., effective September 1.

Raymond H. Cramer has been appointed general manager of the Hyatt Bearings Division of **General Motors Corporation** to succeed **H. O. K. Meister,** who died June 10.

Melvin W. Pauly has been appointed New York manager of the **Lunkenheimer Company.** Also announced was the retirement of **Fred G. Berling,** advertising manager of the firm since April, 1946.

Alexander M. Hamilton, vice-president in charge of foreign sales for the **American Locomotive Com-**

What's so uncommon about THIS common carrier

First of all, railroads stand ready at any time to move anything movable, for anybody, anywhere—and to do it at charges which average less than those of any other form of transportation. They do not pick and choose the kinds of freight they are willing to carry.

The railroads perform this transportation on roadways which they themselves have provided and maintain with their own money. And on those ways, as well as on their cars and locomotives, the railroads pay taxes—taxes which help support your schools, courts, highways and other government services.

But perhaps the most uncommon thing about railroad transportation is that it offers an immediately practical way to reduce congestion on our overloaded highways—for the more freight that is shipped by rail, the safer and the more economical to maintain will our highways be.

ASSOCIATION OF AMERICAN RAILROADS
WASHINGTON 6, D. C.

Listen to THE RAILROAD HOUR every Monday evening on NBC

pany, retired on June 30. Mr. Hamilton also retired as president of the American Locomotive Export Company and of the Steam Locomotive Export Association. He is succeeded by **Manuel Alonso,** who has been appointed manager of foreign sales.

The **Vapor Heating Corporation** has appointed **J. G. Eliasek** to work with railroads at Richmond, Va., Atlanta, Ga., Wilmington, N. C., and

J. G. Eliasek

other railroad centers in the southeast, with headquarters at Richmond. Mr. Eliasek has been associated with Vapor Heating for several years, working out of the main office in Chicago.

As reported in the *Railway Age* of June 10, **Paul C. Van Cleave** has been elected sales vice-president of the **United States Steel Supply Company (U. S. Steel Corporation** subsidiary), effective July 1, succeeding **Marcus J. Aurelius,** who has been elected sales vice-president of the **Columbia Steel Company,** another U.

Paul C. Van Cleave

S. Steel subsidiary. A native of Holbrook, Neb., Mr. Van Cleave is a graduate of the University of Colorado School of Business Administration. He started his career in the steel business in 1934 with the Colorado Fuel & Iron

Left to right: Lester N. Selig, Ben Colman and V. R. Weiss, whose elections as, respectively, chairman of board, president and executive vice-president of General American-Evans Company were reported in *Railway Age* of June 17, page 86

Co. as a sales representative. In May, 1942, he entered the U. S. Army Air Forces as a bombardment crew training staff officer, and upon his discharge in October, 1945, he returned to Colorado Fuel as manager of sales—structural and bars. He joined the U. S. Steel Supply Company in March, 1947, as assistant to vice-president at Chicago, being transferred to Los Angeles, Cal., in June, 1947, as assistant district manager. In January, 1949, he became Los Angeles district manager, the position he held at the time of his election as sales vice-president.

Mr. Aurelius, a native of Los Angeles, started his sales career in the steel industry in 1931 when he joined

Marcus J. Aurelius

Colorado Fuel & Iron after graduation from the University of Denver. He went with U. S. Steel in 1937 as a salesman of railroad materials and commercial forgings for the Carnegie-Illinois Steel Corporation, a subsidiary of U. S. Steel. He later became a sales engineer and assistant manager of sales in that division. In August, 1946, he became vice-president of sales for U. S. Steel Supply Company, in which capacity he was serving prior to his election to the Columbia Steel position.

As reported in the *Railway Age* of June 17, **John A. McCormick** has been appointed assistant vice-president —sales of the **General Steel Castings Corporation,** and in his new position continues in charge of the Chicago district. Mr. McCormick began his business career in 1916 as a

John A. McCormick

draftsman with the Commonwealth Steel Company, and since that time has continued with that company and General Steel Castings. For many years he served in the engineering department at Granite City, Ill., joining the sales department in 1930 at Eddystone, Pa. He was appointed district manager of sales, in charge of the Chicago office, in 1939, the post he held before his recent appointment.

Howard F. Park, Jr., has been appointed district manager—sales in charge of the Eastern district sales office of the company at Eddystone, Pa., to succeed **James W. Cooke,** whose appointment as assistant vice-president also was announced in the June 17 issue. Mr. Park joined the company in April, 1942, and was in charge of the purchasing department until November, 1945, when he became assistant to vice-president—sales. In July, 1948, he was appointed assistant district manager—sales. Mr. Park graduated from the Wharton School of Business, University of Pennsylvania,

Howard F. Park, Jr.

in 1926 and before joining General Steel Castings served with the Western Electric Company and later the Edward G. Budd Manufacturing Company (now the Budd Company).

T. H. Cole, commercial engineer of the **Western Railroad Supply Company,** has been promoted to vice-president in charge of engineering, with headquarters as before in Chicago. **L. H. Jacoby,** assistant commercial engineer, has been promoted to commercial engineer, succeeding Mr. Cole.

Richard Dudgeon, Inc., has moved its plant from 24-26 Columbia street, New York, to new quarters at 789 Bergen street, Brooklyn, N. Y.

W. E. Henges has been appointed assistant to the president of the **Graybar Electric Company,** effective September 1. **C. E. Kirkpatrick** will succeed Mr. Henges as Cleveland, Ohio, district manager. **Allen P.**

Beckloff has been appointed manager of the tubular products division to succeed **R. W. Burt,** recently appointed Chicago plant sales manager. **William McNulty** and **J. W. Horne** have been appointed managers of, respectively, the Syracuse, N. Y., and Memphis, Tenn., branches. Mr. Horne succeeds Mr. Kirkpatrick.

Wilmer H. Cordes, manager of market development and advertising of the **American Steel & Wire Co.,** has been appointed general staff manager of the firm's sales department to succeed **Paul L. Lindsay,** recently appointed Cincinnati, Ohio, manager of sales. Also announced was establishment of separate advertising and market development divisions in the company's general sales department. **O. B. Stauffer** has been appointed manager of the advertising division, and **John E. McGrath,** manager of the market development division.

CAR SERVICE

I.C.C. Service Order No. 854, effective from June 22 until July 31 unless otherwise modified, suspends demurrage rules and charges on coal and other carload freight held for shipment on the Great Lakes or delivery to lake vessels. The order was issued because of a strike of dock personnel at the lake ports.

Second Revised I.C.C. Service Order No. 95 has been modified by Amendment No. 1 which set back the expiration date for one year—until June 30, 1951. The order makes the manager of the Refrigerator Car Section, Car Service Division, A.A.R., an agent of the commission for the purpose of keeping it informed as to the reefer situation.

EQUIPMENT AND SUPPLIES

FREIGHT CARS

The **Ann Arbor** has ordered 75 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Company for delivery during the third quarter of 1950.

The **Baltimore & Ohio** is inquiring for 150 and/or 200 50-ton perforated-lined automobile box cars.

The **Southern** has ordered 250 70-ton covered hopper cars from the Pullman-Standard Car Manufacturing Company at an approximate cost of $1,650,000. The cars will be used on the Georgia Southern & Florida, the New Orleans & Northeastern and the

We got a real buy in our
BATTERY-ELECTRIC Trucks

"Just about a year ago, we decided something had to be done about our tough material-handling problems. We called in a Sales Engineer of one of the electric truck manufacturers for advice, and it wasn't long until we owned six new battery-electric trucks!

"Then things happened! We were able to cut our freight-unloading time 75%. In one of our departments we now handle material six times faster than we used to, and our cost-per-ton for handling all over the plant has been slashed! And do you know, our efficiency increase resulted in a lowering of the unit-cost of our product!

"Well, we could have done some of this with any industrial truck. But here's what we discovered with a battery-electric system.

10¢ "IT'S ECONOMICAL. Our operating costs run around 10¢ per hour per truck for everything—including repairs.

"IT'S DEPENDABLE. We have a very minimum of down-time with our trucks, and they're going strong 16 hours a day.

"IT'S SAFE. That electric truck-and-battery combination minimizes a fire hazard, and keeps our insurance rates down.

"IT'S FUME-FREE. Our men don't have to worry about operating in closed areas. Battery-electric trucks don't give off toxic fumes. No danger of product contamination.

"IT'S CLEAN. In our kind of business, cleanliness is important; and battery-electric trucks are *really* clean!

"IT'S A LONG-RANGE PROGRAM. Friend of mine told me his company has trucks in use that they've had for 22 years! And they're still good!

1928 1950

"Say, maybe you'd better look into *your* material-handling situation. I wouldn't be a bit surprised if you'd get the same satisfactory service and excellent results we did. Tell you what—write to The Electric Industrial Truck Association for their new 'Handbook of Material Handling with Industrial Trucks.' That'll give you plenty of information."

The Electric Industrial Truck Association
3701-E NORTH BROAD STREET • PHILADELPHIA 40, PENNSYLVANIA

Alabama Great Southern, all subsidiaries of the Southern. Deliveries are scheduled to start in the last quarter of 1950. Inquiry for this equipment was reported in *Railway Age* of June 3, page 56.

LOCOMOTIVES

Raise Hp., Tractive Effort Ratings on Baldwin Diesels

The Baldwin Locomotive Works has announced increased horsepower ratings and increased tractive effort ratings on the complete Baldwin-Westinghouse line of Diesel-electric locomotive units, said to be the first major revision on all models since the war. The complete line now includes 800-hp. and 1,200-hp. switchers; 1,600-hp. all-service units with either 4- or 6-wheel trucks and with either 4 or 6 traction motors; a 2,400-hp. road transfer unit, and 1,600-hp. road units. Optional gear ratios are offered in the 1,600-hp. all-service, 2,400-hp. road transfer and 1,600-hp. road units. These changes, the announcement said, "have been made without seriously affecting the interchangeability of parts between older Baldwin locomotives and the new units."

The **New York Central System** has ordered 14 1,500-hp. road-switching and 7 1,200-hp. yard-switching Diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation at an approximate cost of $2,600,000. The units will be placed in service on the Peoria & Eastern which will be completely Dieselized when deliveries, scheduled for before the end of 1950, are completed.

The **Seaboard Air Line** has ordered 60 Diesel-electric locomotive units costing approximately $8,000,000. The American Locomotive-General Electric Companies will build 19 1,600-hp. freight and 4 1,600-hp. general service units; the Electro-Motive Division of General Motors Corporation will construct 15 1,500-hp. freight and 8 1,500-hp. general service units, and the Baldwin Locomotive Works will build 14 1,000-hp. switching units. Deliveries are scheduled for the latter part of 1950 and early 1951.

SIGNALING

The **General Railway Signal Company** has arranged for a method of financing signal installations which has met with the approval of several railroads and financial institutions. Briefly, the railroad proceeds with these installations as in the past. The signal company furnishes the materials of its manufacture, and the railroad purchases other materials, such as wire, cable and batteries, and performs the construction work, the final cost funded by financial institutions. The contracts which have been consummated to date are in the form of a conditional sale. Twenty per cent of the cost of the installation is payable to the signal company on completion of the work, with payment of the balance spead over five years, payable directly to the financial institution, including interest on unpaid balances.

The **Union Pacific** has ordered from the Union Switch & Signal Co. material to install a remote control interlocking controlled from Tower A, Omaha, Neb. In addition to the 2½-ft. style C control machine, which will be installed in Tower A, the order includes style H-2 searchlight signals, M-22A switch machines, relays, rectifiers, transformers and switch circuit controllers. Field installation will be handled by railroad forces.

IRON & STEEL

The **Canadian Pacific** has purchased from the Algoma Steel Corporation, Sault Ste. Marie, Ont., 22 track miles of 135-lb. rail and 406 track miles of 100-lb. rail, all new, for installation in its main line at various points in western territory.

Chicago & Eastern Illinois.—See Construction column.

The **Norfolk Southern** has ordered 300 net tons of rail from the Bethlehem Steel Company.

CONSTRUCTION

Atchison, Topeka & Santa Fe.—A contract has been awarded to the Ellington Miller Company, Chicago, covering the furnishing and erection of a 30- by 60-ft. insulated steel building at Corwith, Ill., for a heating plant.

Atchison, Topeka & Santa Fe.—A contract covering erection of 12 steel buildings at Pueblo, Colo., to be used by the road's mechanical and signal departments in connection with the new hump yard at that point, has been awarded to the Prefabricated Structure Company of Amarillo, Texas. A contract has also been awarded to Ivan Dement of Amarillo for grading and placing of culverts on a spur track to serve the Duval Sulphur & Potash Co., near Carlsbad, N. M.

Baltimore & Ohio.—This road has awarded contracts to the Steiner Construction Company, Baltimore, Md., for additions to meat platforms at Washington, D.C.; to the Keeley Construction Company, Clarksburg, W. Va., for approaches to tunnel No. 1 at Clarksburg; and to C. F. Englehart, Pittsburgh, Pa., for a footbridge in the Mill Creek yard at Cincinnati, Ohio. Estimated total cost of all three projects is $226,000.

Chicago & Eastern Illinois.—Between Vincennes, Ind., and Emison, six mi. of main track are being raised 18 in. to minimize traffic interruptions during future floods of the Wabash river. The track is being raised a maximum of 12 in. on sand and 6 in. on gravel to bring its level to within 12 in. of the crest of last January's severe flood. At the same time three bridges in the area are being raised and 3.15 track mi. of 112-lb. rail is being replaced with new 115-lb. rail purchased from the Carnegie-Illinois Steel Corporation. Between Haubstadt, Ind., and Princeton, 11 mi., present 112-lb. rail also is being replaced with new 115-lb. rail purchased from Carnegie-Illinois.

Denver & Rio Grande Western-Union Pacific.—These roads have filed a joint application with the I.C.C. for authority to change certain trackage arrangements in Salt Lake City, Utah. The D.&R.G.W. will construct approximately 8,435 ft. of new trackage, in two segments, at an estimated cost of $124,900. The segments will connect present D.&R.G.W. tracks with those of the U.P. and the roads have made an agreement under which the former will acquire trackage rights over 5,050 ft. of U.P. tracks. The U.P. will acquire trackage rights over 960 ft. of the newly constructed D.&R.G.W. line. The D.&R.G.W. will abandon 4,100 ft. of its present track which follows Sixth West street.

Lehigh Valley.—This road will rebuild its present steam locomotive plant in Oak Island yards on the outskirts of Newark, N. J., converting the facilities for light repair work on Diesel-electric locomotives, as briefly announced last week in conjunction with an L.V. order for 38 Diesel units (see *Railway Age* of June 24, page 111). Work on the project, which is expected to start shortly and be completed next fall, will be undertaken by the road's own forces at an estimated total cost of $135,000.

Oregon Trunk.—The Hauser Construction Company, Portland, Ore., has been awarded a contract for installation of 152 ft. of 132-in. multiplate pipe with concrete headwalls, and 80 ft. of concrete cribbing and filling at a bridge designated as "T 46-6," at an estimated cost of $50,620. The bridge is a 15-panel frame trestle 204 ft. long with a maximum height of 50 ft.

Spokane, Portland & Seattle.—Contracts have been awarded for construction of a mechanics'-shops building at Portland, Ore. The structure will be a one-story, reinforced concrete building, 100 ft. by 120 ft., with a 20- by 34-ft. extension. Facilities will include a carpenter shop, pipe shop, telegraph shop, paint shop and storage room, tool room, welding shop, lunch room, locker facilities, administrative office and boiler room. Estimated to cost $96,500, the new building will be built by the Bingham Construction

Company of Portland. Contracts for plumbing and heating and electrical work have been awarded to the J. M. Harder Heating & Plumbing Co. and the Allison Electric Company, both of Portland.

FINANCIAL

Alleghany Corporation.—*Loan Collateral Changed.*—The I.C.C. has approved this company's request for a supplemental loan agreement with the Chase National Bank, New York, which will free to Alleghany not less than $5,000,000 of collateral held by the bank as security for a $15,000,000 loan and make available to Alleghany future dividends and interest on collateral the bank will continue to hold. (See *Railway Age* of June 10, page 83.)

Canadian National.—*Financial Aid Bill Passed by Commons.*—The Canadian House of Commons has passed a bill presented by Finance Minister Douglas Abbott providing for financial aid to the Canadian National and to Trans-Canada Air Lines. The amount involved is $24,582,489, divided as follows:

Additions and betterments, less retirements		$30,872,059
Barraute branch in northwestern Quebec		230,000
Acquisition of securities and retirement of capital obligations		717,000
New equipment	$36,698,430	
Less: Amount to be financed by equipment trust issues	26,000,000	
Net for new equipment		10,698,430
Total authorized expenditures		$42,517,489
Less: Estimated amount available from reserves for depreciation and debt discount amortization		17,935,000
Total new financing		$24,582,489

Gulf, Mobile & Ohio.—*Trackage Rights into Birmingham, Ala.*—The Louisville & Nashville has been authorized by the I.C.C. to intervene in connection with this road's proposal to acquire a new route into Birmingham, Ala. The L.&N. is supporting the G.M.&O. plan, which contemplates acquisition of trackage rights over 56.5 mi. of L.&N. line between Tuscaloosa, Ala., and Birmingham, and abandonment of trackage rights over 172 mi. of Illinois Central and Southern lines between Ruslor, Miss., and Birmingham. The I.C. has been authorized to intervene in the case in opposition to the G.M.&O. proposal. (See *Railway Age* of May 13, page 68).

New York, New Haven & Hartford.—*Purchase of B.&P. Debentures and Stock.*—The I.C.C. will hold a public hearing on this road's pending application for authority to purchase the Boston & Providence's matured debenture bonds, most of which are owned by the New Haven's president, Frederic C. Dumaine. The application also involves an N. H. proposal to buy B.&P. stock in the hands of the public. The hearing will be held July 27 at Washington, D. C., before Examiner Harvey H. Wilkinson. (See *Railway Age* of April 8, page 63, and June 17, page 88.)

After the hearing date was set, the New Haven filed a motion asking the commission to consolidate the case for joint hearing with the reopened B. & P. reorganization proceeding which had previously been set for hearing July 24, also at Washington and before Examiner Wilkinson. The N. H. motion said that matters involved in the two cases are so related as to make a joint hearing desirable. (See *Railway Age* of June 17, page 88.)

New Securities

Application has been filed with the I.C.C. by:

CHICAGO, ROCK ISLAND & PACIFIC. — To assume liability for $2,352,000 of series H equipment trust certificates to finance in part acquisition of 34 Diesel-electric locomotives (as listed below) at an estimated total cost of $3,138,393.

	Description and Builder	Estimated Unit Cost
12	1,500-hp. road-switchers (Electro-Motive Division, General Motors Corporation)	$139,514
3	800-hp. switchers (Electro-Motive)	86,000
15	500-hp. switchers (Whitcomb Locomotive Company)	58,815
2	800-hp. switchers (Lima-Hamilton Corporation)	86,000
2	1,000-hp. switchers (Davenport-Besler Corporation)	91,000

The certificates, dated August 1, would mature in 24 semiannual installments of $98,000 each, beginning February 1, 1951. They would be sold on competitive bids, with the interest rate set by such bids.

Division 4 of the I.C.C. has **authorized:**

PENNSYLVANIA-PENNSYLVANIA COMPANY.—The former to issue $60,000,000 of series H general mortgage, 4¼ per cent bonds, all or part of which will be sold to the latter, a subsidiary of the P.R.R. At the same time, Division 4 authorized the Pennsylvania Company to issue and sell $60,000,000 of its own collateral trust serial bonds, and to apply the proceeds to the purchase of the $60,000,000 P.R.R. issue. In the latter connection, the Pennsylvania Company had proposed to apply $16,000,000 to the purchase of Detroit, Toledo & Ironton stock, as authorized in the recent commission report approving control of that road by the P.R.R. and Wabash. As to that, however, the division noted that the D.T. & I. acquisition case is before the commission for reconsideration.

"In view of the undetermined status of that proceeding," it added, "we are unable to make the statutory findings required by section 20a . . . in respect of using part of the proceeds of the . . . bonds to purchase Detroit, Toledo & Ironton capital stock. We will therefore authorize the applicant to use the proceeds . . . to purchase not exceeding $60,000,000 of . . . bonds . . . of the Pennsylvania. . . ."

The Pennsylvania Company bonds will be dated May 1 and will mature in 25 annual installments of $2,400,000 each, beginning May 1, 1951. The division's report approved a selling price of 99 with varying rates of interest for the different maturities. A bid on the approved basis was the only one received for the issue. It was submitted by Kuhn, Loeb & Co. for itself and 50 associates. The interest rates, averaging 3.87 per cent, will range from 2.5 per cent for the 1951-1955 maturities to 4.5 per cent for the 1974-1975 maturities. The average annual cost of the proceeds will be approximately 3.99 per cent, the division's report said.

The P.R.R. series H bonds, secured by that road's general mortgage, will be dated April 1, 1950, and will mature April 1, 1986. Because these bonds are going to a wholly owned subsidiary of the P.R.R., and will not be otherwise disposed of without further order of the commission, the division exempted the issue from the commission's usual competitive-bidding requirements. Proceeds will be used by the P.R.R. to reimburse its treasury in part for past expenditures, and to meet the maturity on April 1, 1952, of its 15-year, 3¼ per cent convertible debenture bonds, presently outstanding in the amount of $52,667,800.

Average Prices Stocks & Bonds

	June 27	Last week	Last year
Average price of 20 representative railway stocks	39.93	41.49	36.16
Average price of 20 representative railway bonds	90.15	91.51	84.17

Dividends Declared

International of Central America.—5% preferred, $1.25 (accumulation), payable July 15 to holders of record July 6.

Minneapolis & St. Louis.—common, 25c, payable July 17 to holders of record July 6.

Northern Central.—common, $2, semiannual, payable July 17 to holders of record June 30.

Philadelphia & Trenton.—common, $2.50, quarterly, payable July 10 to holders of record July 1.

Pittsburgh, Cincinnati, Chicago & St. Louis.—common, $2.50, semiannual, payable July 20 to holders of record July 10.

Rochester & Genesee Valley.—common, $2, semiannual, payable July 1.

Stony Brook.—common, $2.50, semiannual, and 50c, extra, both payable July 5 to holders of record June 30.

RAILWAY OFFICERS

EXECUTIVE

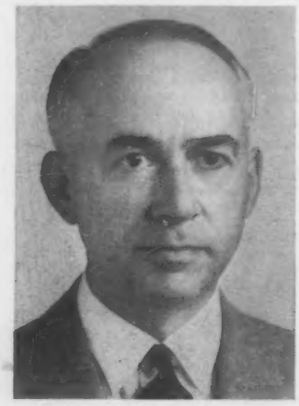
B. B. Bryant, assistant to vice-president—personnel of the Chesapeake & Ohio, has been appointed assistant vice-president—labor relations, with headquarters as before at Richmond, Va. Mr. Bryant was born at Hinton, W. Va., 53 years ago and attended Hinton high school, Fishburne Military School and Pennsylvania College. He entered the service of the C.

B. B. Bryant

& O. as a clerk at Hinton in 1914 and was promoted to timekeeper at Huntington, W. Va., in 1916. Mr. Bryant has been engaged in labor relations work since February, 1946, when he became assistant to the chief of personnel at Richmond. He was appointed labor relations advisor in April, 1947, and assistant to vice-president—personnel on January 1, 1948.

Ralph L. Simpson, whose election as vice-president and general manager

of the Minneapolis, St. Paul & Sault Ste. Marie at Minneapolis, Minn., was reported in the *Railway Age* of June 3, was born at Stratford, Ont., on December 26, 1892, and began his railroad career in September, 1907, with the Grand Trunk (now part of the Canadian National). In March, 1913, he became employed with the Grand Trunk Pacific (now also part of the



Ralph L. Simpson

C. N.), joining the Soo Line in March, 1916, as a mechanic. He became chief draftsman in the mechanical department in 1917, and mechanical engineer in 1923. In 1937 Mr. Simpson was advanced to assistant to the vice-president and general manager, being appointed assistant to the receiver of the Wisconsin Central (part of the Soo Line) in March, 1943. He was promoted to general manager of the Soo Line in September, 1944, the post he held prior to his recent election as vice-president and general manager.

Earl C. Nagels, whose election as president of the Chicago, Aurora & Elgin, with headquarters at Wheaton, Ill., was reported in the *Railway Age* of June 3, was born on July 19, 1900,

Earl C. Nagels

in Pottawatomie county, Kan. Mr. Nagels received his higher education at Kansas University and Washburn College. From 1928 to 1945 he served as president of Nagels Motor Company at Topeka, Kan., handling cars and trucks. Subsequently he became president of Nagels Oil Company, wholesale and retail distributor of gas, oil and greases, at Belvue, Kan., in which capacity he served until his recent election as president of the C. A. & E.

FINANCIAL, LEGAL & ACCOUNTING

Alfred J. Van Hee, who recently became treasurer and paymaster of the Terminal Railroad Association of St. Louis at St. Louis, Mo., as reported in the *Railway Age* of May 20, was born in that city on January 2, 1892, and educated there. He entered the service of the Terminal in October, 1907, as a messenger in the freight agent's office at St. Louis, and, after serving in a similar capacity in the traffic department, in 1910 he became tonnage clerk in the auditor's office of the Wiggins Ferry Company (a subsidiary of the Terminal). Subsequently he held the positions successively of assistant

Alfred J. Van Hee

bookkeeper and bookkeeper in the same office, being appointed special accountant in the auditor's office of the Terminal in 1923. Mr. Van Hee was transferred to the valuation department five years later, and in 1933 returned to the auditor's office as special accountant. He was made chief clerk to the auditor in June, 1948, the post he held prior to becoming treasurer and paymaster.

OPERATING

R. E. Davine has been appointed car accountant of the Rutland at Rutland, Vt., succeeding **J. M. Spafford,** who has retired after a half century of service, including 39 years as car accountant.

J. H. D. Robitaille, trainmaster of the Laurentian division of the Canadian National at Jonquiere, Que., has been appointed assistant superintendent of the Cochrane division at Senneterre, Que., succeeding **J. M. Chouinard,** who has been transferred to Parent, Que., replacing **E. P. Burns.** Mr. Burns has been transferred to Cochrane, Ont., succeeding **J. D. Houde,** who transfers to the Laurentian division at Quebec, Que. **J. L. Martineau** succeeds Mr. Robitaille as trainmaster at Jonquiere.

Michael J. Barry, superintendent of the Winnipeg terminals of the Canadian Pacific, at Winnipeg, Man., has retired because of ill health. He is succeeded by **W. M. Russell,** who has been in charge of the terminals since last November when Mr. Barry went on sick leave. Born on December 21, 1889, in Winnipeg, Mr. Barry started his career with the C.P. in September, 1907, as clerk in the local

W. M. Russell

freight department in his native city. He later served as car checker and in various clerical positions until 1914. From 1915 to 1931, he served successively as night yardmaster at Broadview, Sask., and Winnipeg, and assistant yardmaster and general yardmaster at the latter point. Subsequently he was advanced to assistant superintendent of the Winnipeg terminals, becoming superintendent in April, 1941.

Mr. Russell entered C. P. service in 1912 as a yardman at Winnipeg, and subsequently served for 18 years in the Winnipeg terminals and for 10 years in the capacity of stationmaster. He was appointed assistant superintendent at Regina, Sask., in 1940, later holding the same post at Moose Jaw, Winnipeg and Fort William, Ont. He had served as assistant superintendent at Brandon, Man., for three years prior to his return to Winnipeg last November.

Paul W. Early, special representative of the Lehigh & Hudson River, has been appointed trainmaster at Warwick, N. Y. The position of special representative has been abolished.

The Chicago, Burlington & Quincy has announced the following changes in its operating department: **Harry E. Hinshaw,** general manager of Lines West of the Missouri river, at Omaha, Neb., has been appointed general man-

ager, Lines East of the Missouri river, succeeding **J. C. Grisinger,** who has retired after 54 years of service; **Ernest L. Potarf,** assistant to vice-president—operation at Chicago, succeeds Mr. Hinshaw, and is succeeded in turn by **Elwood P. Stine,** general superintendent at Burlington, Iowa, whose biographical sketch and photograph appeared in the *Railway Age* of October 15, 1949, at the time of his appointment as general superintendent; **E. G. Wesson,** general superintendent at Lincoln, Neb., becomes Mr. Stine's successor; **Leon L. Smith,** superintendent at Hannibal, Mo., succeeds Mr. Wesson, and is in turn replaced by **Raymond R. Gavin,** superintendent at St. Joseph, Mo.; **Edwin R. Shrader,** assistant to general manager at Omaha, becomes superintendent at St. Joseph, succeeding Mr. Gavin; **S. R. Harris,** assistant superintendent at Wymore, Neb., becomes Mr. Shrader's successor, and **Jack E. Hamer,** trainmaster at Beardstown, Ill., succeeds Mr. Harris at Wymore.

C. C. Shannon, assistant superintendent of transportation of the Chicago & North Western, at Chicago, has been advanced to assistant to vice-president in charge of operations. **J. C. Fullmer,** assistant director of research, succeeds Mr. Shannon.

TRAFFIC

Ernest C. Nickerson has been appointed general traffic manager of the Chicago & North Western system. Until recently Mr. Nickerson was vice-president and assistant to president of the New York, New Haven & Hartford. His biography and photograph were published in the *Railway Age* of April 22.

Thomas R. Monro, district freight agent of the Southern at Birmingham, Ala., has been promoted to division freight agent at Lynchburg, Va., succeeding **H. W. Shaefer,** deceased. **Earl L. Dearheart, Jr.,** commercial agent at Birmingham, succeeds Mr. Monroe as district freight agent.

R. A. Pendergrass, general agent of the St. Louis Southwestern at Birmingham, Ala., has been promoted to general passenger agent, with headquarters at Tyler, Tex., succeeding **C. D. Bowman,** retired. Appointed to succeed Mr. Pendergrass is **Kenneth Cameron,** general agent at Nashville, Tenn., who is in turn succeeded by **Russell W. Harlan,** commercial agent at Kansas City, Mo. Mr. Bowman, who was born on May 18, 1880, at St. Louis, Mo., entered railroad service in November, 1893, as a messenger boy, and subsequently served as clerk and ticket clerk on the Chicago, Rock Island & Texas (now part of the Chicago, Rock Island & Pacific) and the Rock Island. From 1899 to 1900, he held the position of tourist conductor on the same roads at Fort Worth, Tex., and Chicago, joining the Cotton Belt in November, 1900, as ticket clerk at Fort Worth. He was later appointed successively ticket agent at Tyler, depot ticket agent at Waco, Tex., and division passenger agent at Memphis, Tenn., subsequently becoming general passenger agent.

Charles W. Campbell and **W. G. Stigall** have been appointed general agents of the Chesapeake & Ohio at Winston-Salem, N. C., and Greenville, S. C., respectively.

C. B. Fordham, division freight agent of the Southern, has been promoted to assistant general freight agent, with headquarters as before at Winston-Salem, N. C.

J. Grady May has been appointed to the newly created position of assistant general freight agent of the Fort Worth & Denver City and the Wichita Valley (parts of the Chicago, Burlington & Quincy system), with headquarters at Fort Worth, Texas.

George T. Dolan has been appointed division freight agent of the Erie at Scranton, Pa., succeeding **Alexander E. Barkalow,** whose appointment as coal freight agent at New York was reported in the *Railway Age* of June 17.

MECHANICAL

E. L. Nylander, car foreman of the Chicago, Rock Island & Pacific at Peoria, Ill., has been promoted to superintendent car department, with headquarters at Chicago. He succeeds **A. V. Nystrom,** whose resignation was reported in the *Railway Age* of April 1.

Lawrence J. Brasher has been appointed assistant master mechanic of the Belt of Chicago, with headquarters at that point.

ENGINEERING & SIGNALING

R. B. Aldridge, assistant valuation engineer of the Missouri-Kansas-Texas, has been promoted to valuation engineer, with headquarters as before at St. Louis, Mo. **A. E. Smith,** rodman in the engineering department at Dallas, Tex., has been advanced to assistant engineer in the valuation department at St. Louis.

W. B. Jackson, assistant division engineer of the Levis division of the Canadian National, has been appointed division engineer of the Cochrane division at Cochrane, Ont., succeeding **V. S. Fowlow,** transferred.

Edgar Bennett, chief engineer maintenance of way and structures of the Eastern lines of the Southern at Charlotte, N.C., has been appointed assistant chief engineer of the system at Washington, D.C., succeeding **George L. Sitton,** who has been appointed assistant to chief engineer at Washington. Mr. Bennett was born on May 26, 1886, at Irvington, Ky., and attended Kentucky State University from 1905 until 1909. He entered railroad service in September, 1909, as rodman and transitman with the Southern at Danville, Ky., and then served sucessively as assistant engineer on enginehouse construction and terminal improvement, assistant engineer maintenance of way, and resident engineer of the Southwestern district at Chattanooga, Tenn. In April, 1920, Mr. Bennett was appointed assistant engineer at Chattanooga and five years later was named roadmaster of the New Orleans & Northeastern and New Orleans Terminal (both Southern subsidiaries). He became engineer maintenance of way at Macon, Ga., in July, 1927, being transferred to Knoxville, Tenn., the following year. Mr. Bennett was advanced to assistant chief engineer maintenance of way and structures of the Central lines at Knoxville in August, 1934, and was promoted to chief engineer maintenance of way and structures of those lines in January, 1944. He transferred to the Eastern lines at Charlotte in December, 1947.

Edgar Bennett

OBITUARY

Frank A. Lehman, former general manager of the Atchison, Topeka & Santa Fe, at Topeka, Kan., who retired in 1939, died on May 27 at Los Angeles, Cal., as a result of a heart attack.

Thomas A. Smith, general signal supervisor of the Atchison, Topeka & Santa Fe's Coast Lines, at Los Angeles, Cal., died of a heart attack aboard the westbound "Grand Canyon" at Barstow, Cal., on May 26.

Fred B. Houghton, who retired in 1938 as vice-president in charge of traffic of the Atchison, Topeka & Santa Fe, died at his home in Altadena, Cal., on May 19, following a long illness.

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Current Publications

PAMPHLETS

Research Facilities for the Lumber and Wood Using Industries. 12 pages, illustrations. Published by the Timber Engineering Company, Washington 6, D. C.

Describes briefly the Timber Engineering Company's research functions and facilities in the fields of wood product development, engineering and wood chemistry.

The L.&N.; One Hundred Years of Progress. 104 pages, illustrations, maps. Published by the Courier-Journal, Louisville, Ky. Available from Arthur E. Eyl, Room 206, Courier-Journal & Times building, Louisville, Ky. 25 cents.

Issued as a supplement to the April 19 issues of the Louisville Courier-Journal and Louisville Times, this brochure reviews the history of the Louisville & Nashville, and contains articles on its equipment, shops, services, track maintenance, employees, and other allied subjects. It contains many illustrations, some in color, and a double-page spread map. The advertising is keyed to the L.&N. centennial.

Pensions for Employees. 91 pages. Published by the Chamber of Commerce of the State of New York, 65 Liberty st., New York 5. $1.

This booklet contains proceedings of the pension forum held February 16, 1950, at New York, sponsored by the committee on industrial problems and relations and the committee on education of the Chamber of Commerce of the State of New York. Subjects covered were "Some Economic Problems Arising from Expanded Pensions," by Martin R. Gainsbrugh, Chief Economist, National Industrial Conference Board; "Industry's Problems in Pension Plans," by A. D. Marshall, assistant secretary, general Electric Company; "Pension Problems of the Moderate Sized Company" by John H. Holsbog, director, industrial relations, Otis Elevator Company; "Financing Voluntary Pension Plans," by J. W. Myers, manager, insurance and social security department, Standard Oil Company (N.J.); and "Collective Bargaining of Pensions" by Burton A. Zorn, management attorney, Proskauer, Rose, Goetz & Mendelsohn. A question and answer period followed the formal addresses. These questions and answers form the concluding section of the booklet.

Nickel Plate Road; Principal Resources Along the Line. Four-page folder and map. Issued by Industrial Development Department, New York, Chicago & St. Louis, Terminal Tower, Cleveland 1, Ohio. Free.

This four-page folder, which describes the territory served by the Nickel Plate, the resources of the area and the services rendered by the industrial development department, opens out into a 12-in. by 35-in. colored map of the line, with resources of the area indicated by appropriate symbols.

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While lunching recently with Joe Menkes, Johnny Mitchell, Bill Lucas, and Rhoda Jacobson of our production department, we naively remarked that many people appear envious of their "routine, tension-free" jobs. In the discussion that followed, coffee spilled and blood pressures soared.

We were told emphatically what happens when an account wires in —24 hours after the closing date— to ask how much longer we can wait for his plates, and how such situations have been admirably handled by our fast-acting, quick-thinking production crew.

We were made to realize, as the sugar bowl crashed to the floor, how 15 pages of a form were sometimes held up at the printers because the 16th page scheduled for delivery on a certain date, was still outstanding.

A frightened waitress ran for the kitchen as we were informed that such things as improper information about color, bleed, and position often embroil the whole editorial department before Menkes and his boys save the day with their usual good humor and dispatch.

So we ordered a toast—extra dry—for the makeup and production men here at Simmons-Boardman, as we realized what a complex and difficult service they daily render our advertisers and our editors.

Menkes just phoned to say that the copy for *this* column is holding up next week's "Age", so . . . BOTTOMS UP! to the production department.

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